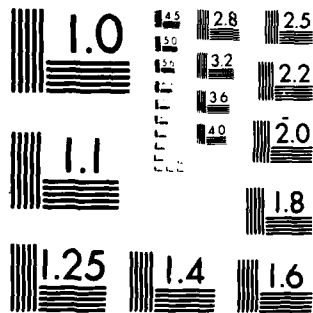


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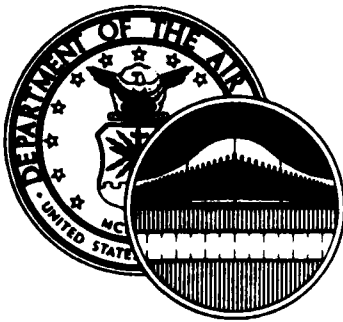
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UNITED STATES AIR FORCE

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OCCUPATIONAL SURVEY REPORT



TELEPHONE EQUIPMENT INSTALLER/REPAIRMAN

CAREER LADDER

AFSC 362X4

AFPT 90-362-437

NOVEMBER 1981

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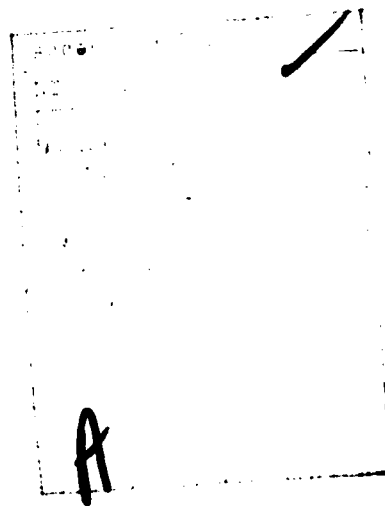
OCCUPATIONAL ANALYSIS PROGRAM
USAF OCCUPATIONAL MEASUREMENT CENTER
AIR TRAINING COMMAND
RANDOLPH AFB, TEXAS 78150

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PREFACE

This report presents the results of a detailed Air Force Occupational Survey of the Telephone Equipment Installer/Repairman career ladder (AFSC 362X4). The report was prepared for the 3750 Technical Training Group (ATC), Training Development Section, located at Sheppard AFB TX in response to their request for occupational data on new systems used in the field, the components replaced in each system, and pole climbing. Authority for conducting surveys is contained in AFR 35-2. Computer outputs from which this report was produced are available for use by operating and training officials.

The Air Force occupational survey program has been in existence since 1956 when initial research was undertaken by the Air Force Human Resources Laboratory (AFHRL) to develop a methodology for gathering and analyzing occupational information. In 1967, an operational occupational survey program was established within Air Training Command and surveys were produced annually for 12 enlisted specialties. In 1972, the program was expanded to conduct occupational surveys covering 51 career fields annually. In late 1976, the program was again expanded to include the survey of officer utilization fields, to permit special management applications projects, and to support interservice or joint service occupational analysis.

The survey instrument used in the present project was developed by Captain P.C. Thatcher, Inventory Development Specialist. Mr. Reginald G. Nolte and Second Lieutenant William A. Carney analyzed the survey data and wrote the final report. This report has been reviewed and approved by Lieutenant Colonel Jimmy L. Mitchell, Chief, Airman Career Ladders Analysis Section, Occupational Analysis Branch, USAF Occupational Measurement Center, Randolph AFB TX 78150.

Copies of this report are distributed to air staff sections, major commands, and other interested training and management personnel (see Distribution List). Additional copies are available upon request to the USAF Occupational Measurement Center, attention to the Chief, Occupational Analysis Branch (OMY), Randolph AFB TX 78150.

This report has been reviewed and is approved.

PAUL T. RINGENBACH, Col, USAF
Commander
USAF Occupational Measurement
Center

WALTER E. DRISKILL, Ph.D.
Chief, Occupational Analysis Branch
USAF Occupational Measurement
Center

SUMMARY OF RESULTS

1. Survey Objectives: The present survey was undertaken to identify new telephone systems in use in the field, the users of these systems, and to provide information concerning those personnel who climb telephone poles and the methods of climbing used. Inventory booklets were administered to Telephone Equipment Installer/Repairmen (AFSC 362X4) personnel worldwide. Survey results are based on responses from 731 AFS 362X4 incumbents (77 percent of assigned). A vast majority of the incumbents surveyed were assigned to AFCC.
2. Career Ladder Structure: DAFSC 362X4 personnel were found to be performing a variety of jobs. These jobs can be loosely grouped together into three functional areas: (1) Communications Coordination, (2) Supervision and Instruction, and (3) Installation, Maintenance, and Repair. The personnel in the Installation, Maintenance, and Repair functional area make up approximately 67 percent of the total sample.
3. Career Ladder Progression: Installing or removing Key Telephone Sets (KTSSs), installing or removing wiring or cables, and installing or removing jumpers are tasks typical of 36234 personnel. Five-skill level personnel also spend a substantial portion of their job time on installation and maintenance tasks but spend more time isolating malfunctions in inside wiring or equipment or performing operational checks of equipment than do 36234 incumbents. Seven-skill level personnel spend a great amount of time performing supervisory tasks but do perform a substantial number of installation and maintenance tasks. The 3/5- and 7-skill level AFR 39-1 descriptions were found to provide a clear overview of the 362X4 career ladder.
4. Job Satisfaction Analysis. A high degree of job satisfaction was noted for 1-48 months, 49-96 months, and 97+ months TAFMS groups. In each of the three groups, satisfaction was higher than it was for comparative groups sampled in 1980.
5. Training Analysis: The analysis of the STS, dated August 1978, and the POI for course 3ABR36234, dated May 1980, showed a number of unreferenced tasks performed by high percentages of personnel at the first enlistment and 3-, 5-, and 7-skill levels. Also, a comparison of the time spent training on the 6A and 1A1/1A2 systems in the resident course and the percent members using these systems in the field would indicate that the content for course 3ABR36234 should be reviewed.
6. Methods of Pole Climbing: For all TAFMS groups sampled, there is a decreasing trend across years of service in the percent members climbing telephone poles in the performance of their duties. For each of the groups sampled, the ladder is the most common method used and the cherry picker (power lift truck) is least commonly used.

7. Implications: Overall, the Telephone Equipment Installer/Repairman career ladder was found to be fairly stable since the last survey in 1977 in terms of jobs performed and job satisfaction. Most personnel report performing installation, maintenance and repair functions on 1A1 and 1A2 key telephone systems, with a smaller number working on 6A equipment. The training being provided in the basic course needs to be reviewed in order to better align systems and component training with actual training needs in the field. In addition, career field managers and trainers should look closely at the mobile communications and TOPS installation functions since personnel in these jobs use equipment different from that on which they are trained and different from that used by the rest of the career ladder.

OCCUPATIONAL SURVEY REPORT
TELEPHONE EQUIPMENT INSTALLER/REPAIRMAN CAREER LADDER
(AFSC 362X4)

INTRODUCTION

This is a report of an occupational survey of the Telephone Equipment Installer/Repairman career ladder (AFSC 362X4) completed by the Occupational Analysis Branch, USAF Occupational Measurement Center, in October 1981. A previous survey of the 362X4 career ladder was published in 1977.

The current project was requested by the 3750th Technical Training Group at Sheppard AFB TX to identify new systems used the field, the users of these new systems, and the components being replaced in each system. Also, the extent to which 362X4 personnel were involved with telephone pole climbing and methods of climbing were other areas of interest. Topics discussed in this report include: (1) survey methodology; (2) job structure within the ladder; (3) an analysis of skill level groups; and (4) a comparison of the results of the current survey with the previous survey.

The basic job of 362X4 personnel as described by AFR 39-1 is to install and maintain electronic/electromechanical telephone equipment. This includes assembling and interconnecting components, maintaining tactical support communications equipment, inspecting and testing equipment, isolating malfunctions through prescribed troubleshooting techniques, maintaining inspection and maintenance records, and performing tests of wire systems and equipment. In addition, all personnel must attend the Telephone Equipment Installation and Repair course (3ABR36234) taught at Sheppard AFB TX. The course is approximately eight weeks in length and includes instruction in electronic fundamentals, technical publications, maintenance inspection, soldering and wiring, circuit diagrams and schematic analysis, and installation and repair of telephone sets, call directors, and key systems.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory AFPT 90-362-437. As a starting point, tasks from the previous 362X4 inventory were reviewed for currency. A new tentative task list was then formulated which included usable tasks from the prior inventory as well as new tasks obtained from a thorough research of current specialty publications and directives. This tentative task list was then validated by subject matter specialists working in operational units, as well as by personnel at the technical training school located at Sheppard AFB TX. From this review process, a final inventory was developed consisting of 365 tasks grouped under 17 duty headings.

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Survey Administration

During the period December 1980 to March 1981, job inventories were administered to all DAFSC 362X4 personnel at operational units both in the CONUS and overseas by local consolidated base personnel offices. Personnel were selected from Uniform Airman Record (UAR) data tapes generated by the Air Force Manpower and Personnel Center (AFMPC) and maintained by the Air Force Human Resources Laboratory (AFHRL).

The 362X4 job inventory consisted of two sections: (1) a background section which included questions about such items as job satisfaction, equipment used, or the reenlistment intentions of the survey respondents, and (2) a task section listing all tasks which could be performed by career ladder personnel. Incumbents first checked the tasks they performed and then rated each task on a nine-point scale showing time spent on that task as compared to all other tasks checked. The rating scale ranged from one (very small amount of time spent) to nine (very large amount of time spent), with a rating of five representing an average amount of time spent performing a task.

To determine the relative amount of time an incumbent spends on each task, all of the incumbents' ratings are assumed to account for 100 percent of his or her time spent on the job. The ratings are then summed and each task rating is then divided by the total number of task responses and the quotient is multiplied by 100. This procedure provides a basis for comparing tasks not only in terms of percent members performing, but also in terms of average percent time spent.

Data Processing and Analysis

Once job inventories are returned from the field, they are prepared so that task responses and background information can be optically scanned. Other biographical information (such as name, base, autovon extension) are keypunched onto discs and entered directly into the computer. Once both sets of data are entered into the computer, the task, background, and biographical information are merged to form a complete case record for each respondent. Computer generated programs using Comprehensive Occupational Data Analysis Programs (CODAP) techniques were then applied to the data.

CODAP produces job descriptions for respondents based on their responses to specific inventory tasks. Computer generated job descriptions are available for DAFSC, TAFMS, and MAJCOM groups, and include such information as percent members performing each task, the average percent time spent performing each task, the percent members utilizing various pieces of equipment, and the cumulative average percent time spent by all members for each task in the inventory.

A key aspect of the USAF occupational analysis program is to examine the structure of career ladders in terms of what people are actually doing in the field, rather than how official career ladder documents say they are organized. This is accomplished by performing a cluster analysis of 362X4 respondents. Those incumbents who perform similar tasks and who spend similar amounts of time on those tasks will be grouped together.

Survey Sample

Personnel were selected to participate in this survey so as to insure an accurate representation across all MAJCOM and paygrade groups. In this study, all incumbents with a 362X4 DAFSC were solicited for their responses. Table 1 reflects the MAJCOM distribution of personnel assigned to the 362X4 career ladder as of January 1981. Table 2 reflects the percentage distribution by paygrade. Table 3 represents the distribution of the survey sample in terms of TAFMS groups. In all, a representative sample was obtained, with 731 of the 948 respondents (77 percent) assigned to this career field sampled.

TABLE 1

COMMAND REPRESENTATION OF SURVEY SAMPLE

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF SAMPLE</u>
AFCC	92%	95%
ATC	5%	2%
OTHER	3%	3%
	100%	100%

TOTAL NUMBER ASSIGNED* - 948
TOTAL NUMBER ELIGIBLE FOR SURVEY** - 807
OCCUPATIONAL SURVEYS RETURNED - 735
RETURN RATE - 91%

* AUTHORIZED STRENGTH AS OF JANUARY 1981

** EXCLUDES THOSE IN PCS STATUS, HOSPITAL, OR WITH
LESS THAN 6 WEEKS ON THE JOB

TABLE 2

PAYGRADE REPRESENTATION OF SURVEY SAMPLE

<u>PAYGRADE</u>	<u>PERCENT OF ASSIGNED*</u>	<u>PERCENT OF SAMPLE</u>
AIRMAN	33%	32%
E-4	22%	21%
E-5	23%	24%
E-6	14%	15%
E-7	8%	8%
	100%	100%

* AS OF JANUARY 1981

TABLE 3
TAFMS DISTRIBUTION OF SURVEY SAMPLE

	MONTHS IN THE SERVICE					
	1-48	49-96	97-144	145-192	193-240	241+
NUMBER IN AFSC 362X4 SAMPLE	293	169	94	90	64	16
PERCENT OF AFSC 362X4 SAMPLE	40%	24%	13%	12%	9%	2%

Task Factor Administration

In addition to completing the job inventory, selected senior 362X4 personnel were also asked to complete a second booklet for either training emphasis or task difficulty (see Table 4). The task difficulty and training emphasis rating booklets are processed separately from the job inventories. This information is used in a number of different analyses discussed in more detail within the report.

Task Difficulty: Each senior NCO completing a task difficulty booklet was asked to rate all of the tasks on a nine-point scale from extremely low to extremely high as to the relative difficulty of that task. Difficulty is defined as the length of time it requires an average member to learn to do that task. Task difficulty data were independently solicited from experienced 7-skill level personnel stationed worldwide. These raters were representative of the career ladder, with a majority of the raters belonging to AFCC (see Table 4). The interrater reliability (as assessed through components of variance of standard group means) for the 43 DAFSC 362X4 raters who returned booklets was .93, which reflects very high agreement among raters. Ratings were then adjusted so that tasks of average difficulty have ratings of 5.0. The resulting data are a rank ordering of tasks indicating a degree of difficulty for each task in the inventory.

Training Emphasis: Individuals completing training emphasis booklets were asked to rate all of the tasks on a ten-point scale from no training required to extremely heavy training. Training emphasis is a rating of tasks indicating where emphasis should be placed on structured training for first-term personnel. Structured training is defined as training provided as resident technical schools, Field Training Detachments (FTD), Mobile Training Teams (MTT), formal OJT, or any other organized training method. Training emphasis data were independently solicited from experienced 7-skill level personnel stationed worldwide. The interrater reliability (as assessed through components of variance of standard group means) for these raters was .96. Tasks rated by the 39 raters had an average training emphasis rating of 2.24 and a standard deviation of 1.86.

When used in conjunction with other factors, such as percent members performing, the task difficulty and training emphasis ratings can provide insight into the training requirements of a specialty. This may help validate the lengthening or shortening of specific units of instruction to refine various training programs.

TABLE 4
COMMAND REPRESENTATION OF 362X4 TASK DIFFICULTY AND
TRAINING EMPHASIS RATERS

<u>COMMAND</u>	<u>PERCENT OF ASSIGNED</u>	<u>PERCENT OF TASK DIFFICULTY RATERS</u>	<u>PERCENT OF TRAINING EMPHASIS RATERS</u>
AFCC	92	89	92
ATC	5	5	5
OTHER	<u>3</u>	<u>6</u>	<u>3</u>
	100	100	100

CAREER LADDER STRUCTURE

The structure of jobs within the Telephone Equipment Installer/Repairman career ladder was examined on the basis of similarity of tasks performed and the percent of time spent ratings provided by job incumbents, independent of specialty or other background factors.

For the purpose of organizing individual jobs into similar units of work, an automated job clustering program is used. This hierarchical grouping program is a basic part of the Comprehensive Occupational Data Analysis Program (CODAP) system for job analysis. Each individual job description in the sample is compared to every other job description in terms of tasks performed and the relative amount of time spent on each task in the job inventory. The automated system is designed to locate the two job descriptions with the most similar tasks and percent time ratings and combine them to form a composite job description. In successive stages, new members are added to initial groups or new groups are formed based on the similarity of tasks and percent of time ratings in each individual job description. This procedure is continued until all individuals and groups are combined to form a single composite representing the total sample. The resulting analysis of the variety of groups of jobs serves to identify: (1) the number and characteristics of the different jobs which exist within the career ladders; (2) the tasks which tend to be performed together by the same respondents; and (3) the breadth or narrowness of the jobs which exist within the Telephone Equipment Installer/Repairman career ladder.

The basic identifying group used in the hierarchical job structuring process is the Job Type. A job type is a group of individuals who perform many of the same tasks and who spend similar amounts of time performing them. When there is a substantial degree of similarity between different job types, they are grouped together and labeled as Clusters. In many career ladders, there are specialized job types that are too dissimilar to be grouped into any cluster. These unique groups are labeled Independent Job Types.

The jobs performed by Telephone Equipment Installation/Repair career ladder personnel are illustrated in Figure 1. Based on the similarity of tasks performed and the amount of time spent performing each task, four clusters and eight independent job types were identified. These clusters and independent job types include the following:

COMMUNICATIONS COORDINATION

- I. GOVERNMENT-OWNED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL (GRP036, N=24)
 - a. Telephone Surveyor NCOIC's (GRP160, N=9)
 - b. Senior Telephone Surveyors (GRP104, N=7)
 - c. Junior Telephone Surveyors (GRP063, N=5)
- II. LEASED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL (GRP053, N=45)
 - a. Leased Telephone Monitors (GRP152, N=37)
 - b. Leased Telephone NCOIC's (GRP147, N=5)

SUPERVISION AND INSTRUCTION

- III. SUPERVISORY PERSONNEL (GRP019, N=68)
 - a. Resident Course and OJT Supervisors (GRP066, N=12)
 - b. Government-Owned Telephone Communications Supervisors (GRP093, N=35)
 - c. Customer Service and Job Control Supervisors (GRP105, N=9)
- IV. TRAINING INSTRUCTORS (GRP007, N=27)
- V. QUALITY CONTROL NCOIC's (GRP002, N=15)

INSTALLATION, REPAIR, AND MAINTENANCE

- VI. INSTALLATION AND REPAIR PERSONNEL (GRP163, N=346)
 - a. Junior Installation and Repair Crewmembers (GRP183, N=58)
 - b. Senior Installation and Repair Crewmembers (GRP175, N=284)
- VII. TELEPHONE EQUIPMENT INSTALLER NCOIC's (GRP121, N=13)
- VIII. TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS (GRP099, N=32)
- IX. OUTSIDE PLANT NCOIC's (GRP170, N=25)
- X. CABLE AND WIRE INSTALLATION CREWMEMBERS (GRP059, N=11)
- XI. MOBILE COMMUNICATIONS CREWMEMBERS (GRP061, N=49)
- XII. TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS (GRP012, N=17)

The respondents forming these job types and clusters account for 92 percent of the survey sample. The remaining eight percent did not group with any of the job clusters described above. Some of the titles held by respondents in this remaining eight percent were: Job Controller, Assistant NCOIC, Wire Maintenance Superintendent, and Phone Maintenance and Repair. These personnel did not group with any cluster or job type because of the unique job they performed or the manner in which they perceived their job.

Cluster and Job Type Descriptions

Brief descriptions of each cluster and independent job type are presented below. Additional information about the clusters and job type groups are presented in Tables 5 through 7. In addition, lists of the most commonly performed tasks for each cluster or job type are presented in Appendix A of this report.

I. GOVERNMENT-OWNED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL. The 24 members of this job group are primarily responsible for processing government-owned telephone equipment. In other words, they are responsible for working with individual subscribers' request for telephone equipment and monitoring or evaluating the equipment (i.e., customer service

functions). As such, members of this group are not involved with actual equipment maintenance but evaluate equipment operation and services according to customer requirements. Typical tasks include:

- assigning work order numbers to government-owned telephones
- performing site survey evaluations in response to government-owned telephone service requests
- estimating costs of installations and equipment services on government-owned telephone equipment
- coordinating government-owned telephone installation activities between inside and outside plant
- planning locations of equipment with subscribers
- maintaining government-owned work order registers

As shown in Table 5, 54 percent of the cluster were at the 7-skill level; members of this group perform an average of 35 tasks. Three job type groups were identified within the cluster, but they differ only in experience level (months TAFMS).

II. LEASED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL. These 45 members are responsible for processing leased telephone equipment and, like the preceding cluster, spend the majority of their job time performing subscriber service functions, such as taking subscriber requests and evaluating telephone service. They are not involved with equipment maintenance and installation. They perform such tasks as:

- coordinating leased telephone installation activities between base units and commercial telephone companies
- performing site survey evaluations in response to leased telephone service requests
- maintaining leased telephone work order registers
- preparing leased communication service reports
- evaluating leased telephone system damage incidents

As can be seen in Table 5, this cluster is almost evenly split between 5- and 7-skill level personnel. Respondents perform an average of 38 tasks. They appear relatively dissatisfied with their jobs. Only 51 percent consider their job interesting, 49 percent perceive their job as utilizing their talents not at all or very little, and 78 percent feel that the job does not utilize their training. Surprisingly, 62 percent plan to reenlist.

Two job types were identified within the cluster but differ only in the average number of tasks performed.

III. SUPERVISORY PERSONNEL. The 68 members of this cluster are primarily responsible for performing supervisory duties of the career ladder. Typical tasks include:

- counseling personnel on personal or military related problems
- planning or scheduling work assignments
- planning equipment replacement, repair, or disposal
- supervising telephone equipment installation and repair specialists (AFSC 36254)
- determining OJT training requirements

As shown in Table 5, 84 percent of this cluster is composed of 7-skill level personnel with an average of 174 months in service. They are almost evenly split between CONUS and overseas assignments. Respondents in this cluster perform an average of 74 tasks and supervise an average of five people each. Although most of their job time involves supervision, some time is spent on telephone equipment and maintenance.

Table IX in Appendix B shows the equipment used by at least 30 percent of the members of the cluster. Of the six pieces of equipment used, four are associated with 1A2 Key Telephone Systems.

Three job types were identified within the cluster but differ only in experience (months TAFMS) and average number of tasks performed.

IV. TRAINING INSTRUCTORS. This group has an average paygrade of E-5 with an average time in service of 100 months. Fifty-six percent of the group is in AFCC, with 44 percent in ATC. They are primarily involved with conducting formal training courses at the technical school or proficiency training at the unit level. Typical tasks include:

- conducting resident course classroom training
- preparing lesson plans
- demonstrating how to locate technical information
- counseling trainees on training progress
- scoring tests
- evaluating progress of resident course students

Sixty-six percent are at the 5-skill level, with 30 percent at the 7-skill level. They supervise an average of one person each. The group performs an average of 21 tasks, and has a job difficulty index of 9.5 (see Analysis of Job Difficulty).

V. QUALITY CONTROL NCOIC's. This independent job type has an average paygrade of E-6, with an average time in service of 141 months. They are responsible for conducting quality control inspections, ensuring compliance with performance standards for subordinates, and evaluating maintenance and safety programs. Typical tasks include:

- scheduling quality control inspections
- evaluating compliance with performance standards
- analyzing workload requirements
- evaluating safety programs
- inspecting tools or climbing equipment
- evaluating training methods or techniques

Sixty percent of this group hold the 7-skill level and 40 percent hold the 5-skill level. They supervise an average of one person each. Seventy-three percent are assigned to the CONUS. They perform an extremely low average of eight tasks, and have a job difficulty index of 8.4 (see Analysis of Job Difficulty). Fifty-three percent indicate an intention to reenlist.

VI. INSTALLATION AND REPAIR PERSONNEL. This cluster constitutes 47 percent of the entire sample. Seventy-two percent of the members hold the 5-skill level and have been in the service an average of 55 months. They have an average grade of E-4 and are responsible for installation, maintenance, and repair of telephone systems, components, and wiring. Tasks include:

- installing or removing jumpers
- inserting dial center cards and numbering strips on telephone sets
- installing or removing connecting blocks
- isolating malfunctions in inside wiring
- terminating feeder cables
- assembling or disassembling telephone sets
- performing ring-back operational checks of instruments

As can be seen in Table 5, respondents perform an average of 88 tasks and have a job difficulty index of 14.6. Seventy-four percent are assigned to the CONUS.

Two job types were identified within the cluster and differ in terms of TAFMS and average number of tasks performed.

Table X in Appendix B shows the equipment used by at least 30 percent of the members of this cluster. Not surprisingly, personnel in this cluster employ a wide variety of equipment concentrated mostly in those components of 1A1 and 1A2 Key Telephone Systems.

VII. TELEPHONE EQUIPMENT INSTALLER NCOIC's. This independent job type is comprised of 5- and 7-skill level personnel with an average paygrade of E-6. Members supervise an average of four persons each. They are concerned with planning and supervising the installation of telephone equipment but perform a number of technical tasks as well. Typical tasks include:

- installing or removing jumpers
- planning work assignments
- planning telephone installation requirements
- isolating malfunctions in substation equipment
- scheduling work assignments
- isolating malfunctions in Key Telephone Units (KTUs)
- supervise telephone equipment installation and repair specialists (AFSC 36254)

Sixty-one percent are assigned to the CONUS and 39 percent have overseas assignments. Respondents in this group have been in the service an average of 157 months and perform an average of 92 tasks. As can be seen in Table XI in Appendix B, most of the equipment installed by at least 30 percent of the members of this group is comprised of components of 1A2 key telephone systems.

VIII. TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS. Members of this group have an average paygrade of E-3 and have been in the service an average of 32 months. They are evenly split between the 3- and 5-skill levels. They are responsible for carrying out telephone equipment installation

duties but differ from the Installation and Repair Personnel cluster in that the present group performs few maintenance tasks (see Table XVII, Appendix A) and uses less types of 1A1 and 1A2 telephone equipment (see Table XII, Appendix B). Typical tasks include:

- installing or removing jumpers
- connecting or disconnecting inside cables at connecting blocks
- installing or removing key telephone sets
- installing or removing cable runs
- installing or removing substation instruments

Ninety-one percent are assigned to the CONUS. Members of this group perform an average of 37 tasks.

IX. OUTSIDE PLANT NCOIC's. The 25 members of this independent job type are predominantly at the 7-skill level. They perform installation and maintenance tasks as well as administrative and supervisory tasks, supervising an average of three people each. They are assigned to the outside plant as opposed to other technical personnel who perform inside plant duties. Typical tasks include:

- annotating telephone equipment key system record/worksheet forms (AFTO Form 122)
- installing or removing inside wiring
- performing operational checks of KTSs
- installing or removing jumpers
- briefing subscribers on KTS functions
- installing or removing power supply units

Members of this group have an average time in service of 138 months and an average paygrade of E-6. They perform an average of 168 tasks.

Table XIII in Appendix B shows the equipment used by at least 30 percent of the members of this independent job type. This group uses more different pieces of equipment than any other group in the survey, with most of the equipment comprised of components of 1A1 and 1A2 Key Telephone Systems.

X. CABLE AND WIRE INSTALLATION CREWMEMBERS. This job group has an average paygrade of E-3 and its members have been in the service an average of only 42 months. They are responsible for the installation, maintenance, and repair of cables and inside and outside wiring. Tasks include:

- connecting or disconnecting inside cables at connecting blocks
- installing or removing external wiring
- installing or removing connecting blocks
- installing or removing cable runs
- isolating malfunctions in outside wiring equipment
- installing or removing ground wires

Seventy-three percent are assigned to the CONUS and 73 percent are at the 5-skill level, with 27 percent at the 3-skill level. They perform an average of 27 tasks.

Table XIV in Appendix B shows equipment used by at least 30 percent of the members of this independent job type. Most of the equipment is comprised of components of 1A2 Key Telephone Systems.

XI. MOBILE COMMUNICATIONS CREWMEMBERS. This group has an average paygrade of E-4 and has been in the service an average of 68 months. They are primarily responsible for the installation, maintenance, and operation of mobile or field telephone systems. Typical tasks include:

- terminating field phone wiring
- isolating malfunctions on 407-L cable hocks
- isolating malfunctions in field telephone instruments
- operating "M" series government vehicles
- isolating malfunctions on TA-236 telephone instruments
- installing or removing WD-1 field wire
- installing or removing BA-30 "D" field telephone batteries

Eighty percent are assigned to the CONUS. As can be seen in Table 5, 76 percent are at the 5-skill level, 14 percent are at the 3-skill level, and 10 percent are at the 7-skill level. They supervise an average of one person and perform an average of 61 tasks with a job difficulty index of 8.4 (see Analysis of Job Difficulty). Job satisfaction indicators are somewhat low for this group. Forty-seven percent consider their job as dull, with only 41 perceiving their job as interesting. Sixty-seven percent perceive that their talents are utilized little or not at all and 84 percent perceive their training as being utilized little or not at all. Forty-three percent plan to reenlist.

Table XV in Appendix B lists those pieces of equipment used by at least 30 percent of the members of this independent job group. That only two components are listed is not indicative of the fact that Mobile Communications Crewmembers perform tasks employing a number of pieces of equipment. The equipment listed in the background section of the inventory does not include equipment specific to Mobile Communications Crewmembers but the tasks included in Duty Q of the inventory do, indeed, indicate that the members of this group are using such equipment as 407-L cables, TA-312 field telephones, TA-236 field telephones, and WF-16/U wire.

XII. TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS. This independent job type has an average paygrade of E-4 and has been in the service an average of 45 months. They are responsible for the installation, repair, and maintenance of such equipment as public address speakers, amplifiers, and wiring and are assigned almost exclusively to Patrick AFB/Cape Canaveral. Typical tasks include:

- installing or removing public address system cables
- installing or removing public address systems speakers from locations such as buildings, telephone poles, or stands
- installing or removing public address system amplifiers
- installing jumpers at main distribution frames (MDF)
- installing or removing power supply units
- soldering wiring connections

Eighty-eight percent of this group's members are at the 5-skill level, with six percent each at the 3- and 7-skill levels. They only perform an average of 13 tasks, and have a job difficulty index of 5.4 (see Analysis of Job Difficulty). Job satisfaction indices are relatively low for this group. Fifty-nine percent consider their jobs "dull" or "so-so", 47 percent consider their talents as being utilized little or not at all, and 82 percent feel that their training is utilized little or not at all. Only 29 percent plan to reenlist.

Analysis of Job Difficulty

The Job Difficulty Index (JDI) is a measurement designed to permit comparison of the relative difficulty of jobs. The JDI takes into consideration the number of tasks performed, the amount of time spent on those tasks, and the relative difficulty of tasks performed by a job group. Once the JDI's are computed for each job group, taking these three factors into consideration, the JDI's are adjusted so that the average JDI is equal to 13.0. Comparisons can then be made which may impact upon training, classification, and utilization of personnel. Table 8 shows the JDI for each cluster and independent job type in this study.

Within the first functional area, Communications Coordination, the JDI values range from 10.8 to 12.3 (i.e., slightly below average). The second functional area, Supervisory or Instructional, ranges from 16.2 to 18.4. The third and largest functional area, Installation, Maintenance, and Repair, has JDI's ranging from the highest value in the study (20.7 for Outside Plant NCOIC's) to the lowest (5.4 for both Cable and Wire Installers and TOPS Installers).

The average number of tasks performed by group members has a substantial effect on the JDI in this study. For example, a comparison of Mobile Communications Crewmembers and Quality Control NCOIC's shows that both groups have a Job Difficulty Index of 8.4. Thus, it appears that both groups perform tasks of equal difficulty but, in fact, Mobile Communications Crewmembers are performing an average of 61 tasks while Quality Control NCOIC's are performing an average of eight tasks. It seems, then, that the tasks of the Mobile Communications Crewmembers are not more difficult than those of the Quality Control NCOIC's; they simply perform a larger number of tasks. Also, both TOPS Installers and Cable and Wire Installation Crewmembers have a JDI of 5.4 but perform an average number of 13 and 27 tasks, respectively.

Overall, it appears that while the job difficulty does not significantly differ for the three functional areas, members of the Installation, Maintenance, and Repair functional area perform a greater number of tasks than members of the other two areas. Thus, while their tasks may be no more difficult than those of the other areas, they perform a greater number of them.

Summary

The Telephone Equipment Installation/Maintenance career ladder is basically divided into three functional areas: (1) communications coordination including subscriber request and customer service functions (two clusters), (2) pure supervisory or instruction including quality control and resident course instruction (one cluster and two independent job types), and (3) installation, repair, and maintenance (one cluster and six independent job types) including installation supervision (see Figure 1).

The career ladder structure appears to have remained fairly stable since the last occupational survey with no new functional areas added. A review of job satisfaction and related data (Table 7) shows that job satisfaction is relatively high across all groups in the career ladder with a few exceptions. Relatively few of the Leased Telephone Communications Coordinators, Mobile Communications Crewmembers, and Transistorized Operation Phone System (TOPS) installers consider their jobs interesting or consider their talents and training to be well utilized. All of the other groups seem to feel that their talents and training are at least fairly well utilized. Cable and Wire Installation Crewmembers also indicate rather low reenlistment intentions.

TABLE 5

BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

JOB DIFFICULTY INDEX AVERAGE NUMBER OF TASKS PERFORMED AVERAGE PAYGRADE	GOVT. OWNED TELEPHONE COORDINATOR PERSONNEL		LEASED TELEPHONE COORDINATOR PERSONNEL		SUPERVISORY PERSONNEL		TRAINING INSTRUCTORS		QUALITY CONTROL NCOIC's		INSTALLATION AND REPAIR PERSONNEL	
	10.8	12.3	16.2	9.5	8.4	14.6						
	35	38	74	21	8	88						
	E-6	E-6	E-6	E-5	E-6	E-4						
DAFSC:												
36234	-	-	-	4%	-	18%						
36254	46%	51%	13%	66%	40%	72%						
36274	54%	49%	84%	30%	60%	10%						
MAJOR COMMAND:												
AFCC	100%	96%	94%	56%	93%	99%						
ATC	-	-	6%	44%	7%	-						
SAC	-	2%	-	-	-	1%						
TAC	-	2%	-	-	-	-						
AVERAGE MONTHS TAFMS												
PERCENT IN FIRST ENLISTMENT	150	158	174	100	141	55						
PERCENT IN CONUS	8%	2%	-	26%	7%	56%						
	67%	93%	51%	93%	73%	74%						

NOTE: DAFSC AND MAJOR COMMAND COLUMNS MAY NOT EQUAL 100 PERCENT DUE TO "OTHER" RESPONSES OR "NO RESPONSE"

TABLE 5 (CONTINUED)
BACKGROUND INFORMATION FOR CLUSTERS AND INDEPENDENT JOB TYPES

	TELEPHONE EQUIPMENT INSTALLER		TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS		OUTSIDE PLANT NCOIC's		CABLE AND WIRE INSTALLATION CREWMEMBERS		MOBILE COMMUNICATIONS CREWMEMBERS		TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS	
	NCOIC's		NCOIC's		NCOIC's		NCOIC's		NCOIC's		NCOIC's	
JOB DIFFICULTY INDEX	16.9		7.4		20.7		5.4		8.4		5.4	
AVERAGE NUMBER OF TASKS PERFORMED	92		37		68		27		61		13	
AVERAGE PAYGRADE	E-6		E-3		E-6		E-3		E-4		E-4	
DAFSC:												
36234	-		50%		-		27%		14%		6%	
36254	46%		50%		28%		73%		76%		88%	
36274	54%		-		72%		-		10%		6%	
MAJOR COMMAND:												
AFCC	100%		97%		100%		100%		92%		100%	
ATC	-		-		-		-		-		-	
SAC	-		-		-		-		-		-	
TAC	-		-		-		-		-		-	
AVERAGE MONTHS TAFMS	157		32		138		42		68		45	
PERCENT IN FIRST ENLISTMENT	85%		100%		-		73%		51%		65%	
PERCENT IN CONUS	61%		91%		28%		73%		80%		94%	

NOTE: DAFSC AND MAJOR COMMAND COLUMNS MAY NOT EQUAL 100 PERCENT DUE TO "OTHER" RESPONSES OR "NO RESPONSE"

TABLE 6

RELATIVE PERCENT TIME SPENT ON DUTIES BY CLUSTERS AND INDEPENDENT JOB TYPES

DUTIES	GOVT. OWNED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL (N=24)	LEASED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL (N=45)	SUPERVISORY PERSONNEL (N=68)	TRAINING INSTRUCTORS (N=27)	QUALITY CONTROL NCOIC's (N=15)	INSTALLATION AND REPAIR PERSONNEL (N=346)
A ORGANIZING AND PLANNING	7	8	22	4	15	2
B DIRECTING AND IMPLEMENTING	3	7	21	15	16	12
C INSPECTING AND EVALUATING	8	15	19	4	32	1
D TRAINING	2	3	12	39	19	1
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	15	16	6	13	4	3
F PERFORMING GENERAL FUNCTIONS	14	6	7	9	10	5
G INSTALLING AND REPAIRING TELEPHONE SYSTEM OUTSIDE WIRING	5	2	1	4	-	13
H INSTALLING AND MAINTAINING TELEPHONE SYSTEMS INSIDE WIRING OR EQUIPMENT	3	1	2	1	-	21
I INSTALLING AND MAINTAINING KEY TELEPHONE SYSTEMS (KTS)	4	*	3	3	-	21
J PERFORMING BENCH REPAIR ON TELEPHONE SYSTEM COMPONENTS	*	-	1	3	-	9
K INSTALLING AND MAINTAINING SWITCHING UNITS OR SYSTEMS	*	*	1	1	-	3
L INSTALLING AND MAINTAINING SPECIAL CIRCUITS	*	*	*	-	-	6
M PROCESSING LEASED TELEPHONE EQUIPMENT	6	38	*	-	-	*
N PROCESSING GOVT. OWNED TELEPHONE EQUIPMENT	29	*	3	*	-	*
O PERFORMING SITE SUPPORT FUNCTIONS	*	*	*	1	-	2
P PERFORMING CUSTOMER SERVICE AND JOB CONTROL FUNCTIONS	3	2	2	*	-	*
Q PERFORMING MOBILE COMMUNICATIONS FUNCTIONS	1	-	*	2	4	1

*INDICATES LESS THAN ONE PERCENT

TABLE 6 (CONTINUED)

RELATIVE PERCENT TIME SPENT ON DUTIES BY CLUSTERS AND INDEPENDENT JOB TYPES

DUTIES	TELEPHONE EQUIPMENT		TELEPHONE EQUIPMENT		OUTSIDE PLANT		CABLE AND WIRE		MOBILE COMMUNICATIONS		TRANSISTORIZED OPERATION PHONE SYSTEM	
	INSTALLER NCOIC's (N=13)	INSTALLER CREWMEMBERS (N=32)	INSTALLER NCOIC's (N=25)	INSTALLER CREWMEMBERS (N=11)	INSTALLER NCOIC's (N=49)	INSTALLER CREWMEMBERS (N=17)	INSTALLER NCOIC's (N=49)	INSTALLER CREWMEMBERS (N=17)	INSTALLER NCOIC's (N=49)	INSTALLER CREWMEMBERS (N=17)	INSTALLER NCOIC's (N=49)	INSTALLER CREWMEMBERS (N=17)
A ORGANIZING AND PLANNING	13	1	9	1	4	3						
B DIRECTING AND IMPLEMENTING	2	*	8	1	3	5						
C INSPECTING AND EVALUATING	7	*	8	-	2	2						
D TRAINING	6	-	7	1	2	1						
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	5	1	8	1	1	*						
F PERFORMING GENERAL FUNCTIONS	5	3	8	9	3	23						
G INSTALLING AND REPAIRING TELEPHONE SYSTEM OUTSIDE WIRING	3	11	6	39	6	9						
H INSTALLING AND MAINTAINING TELEPHONE SYSTEMS INSIDE WIRING OR EQUIPMENT	17	33	9	31	5	11						
I INSTALLING AND MAINTAINING KEY TELEPHONE SYSTEMS (KTS)	20	37	15	7	1	14						
J PERFORMING BENCH REPAIR ON TELEPHONE SYSTEM COMPONENTS	5	8	5	4	3	7						
K INSTALLING AND MAINTAINING SWITCHING UNITS OR SYSTEMS	1	1	5	1	3	-						
L INSTALLING AND MAINTAINING SPECIAL CIRCUITS	3	2	*	2	1	3						
M PROCESSING LEASED TELEPHONE EQUIPMENT	*	-	4	-	*	-						
N PROCESSING GOVT. OWNED TELEPHONE EQUIPMENT	2	*	4	*	*	*						
O PERFORMING SITE SUPPORT FUNCTIONS	1	*	1	3	1	21						
P PERFORMING CUSTOMER SERVICE AND JOB CONTROL FUNCTIONS	1	*	2	-	1	-						
Q PERFORMING MOBILE COMMUNICATIONS FUNCTIONS	1	*	1	1	65	1						

TABLE 7

JOB SATISFACTION AND RELATED DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT MEMBERS RESPONDING)

	GOVT. OWNED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL	LEASED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL	SUPERVISORY PERSONNEL	TRAINING INSTRUCTORS	QUALITY CONTROL NCOIC's	INSTALLATION AND REPAIR PERSONNEL
<u>I FIND MY JOB:</u>						
DULL	4	29	6	15	27	2
SO-SO	17	20	6	11	13	6
INTERESTING	79	51	84	70	60	91
<u>MY JOB UTILIZES MY TALENTS:</u>						
NOT AT ALL TO VERY LITTLE	8	49	12	19	47	6
FAIRLY WELL OR BETTER	92	51	84	81	53	93
<u>MY JOB UTILIZES MY TRAINING:</u>						
NOT AT ALL TO VERY LITTLE	29	78	13	22	40	7
FAIRLY WELL OR BETTER	71	22	84	78	60	92
<u>I PLAN TO REENLIST:</u>						
NO OR PROBABLY NO	46	36	44	37	47	53
YES OR PROBABLY YES	54	62	56	63	53	47

NOTE: COLUMNS MAY NOT EQUAL 100 PERCENT DUE TO "NO RESPONSE"

TABLE 7 (CONTINUED)

JOB SATISFACTION AND RELATED DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES
(PERCENT MEMBERS RESPONDING)

	TELEPHONE EQUIPMENT INSTALLER NCOIC's	TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS	OUTSIDE PLANT NCOIC's	CABLE AND WIRE INSTALLATION CREWMEMBERS	MOBILE COMMUNICATIONS CREWMEMBERS	TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS
I FIND MY JOB:						
DULL	15	3	4	-	47	24
SO-SO	8	3	8	9	10	35
INTERESTING	69	85	88	91	41	41
MY JOB UTILIZES MY TALENTS:						
NOT AT ALL TO VERY LITTLE	15	6	12	-	67	47
FAIRLY WELL OR BETTER	77	94	88	100	33	53
MY JOB UTILIZES MY TRAINING:						
NOT AT ALL TO VERY LITTLE	15	9	8	-	84	82
FAIRLY WELL OR BETTER	77	88	92	100	16	18
I PLAN TO REENLIST:						
NO OR PROBABLY NO	15	9	28	73	53	71
YES OR PROBABLY YES	77	88	72	2	43	29

NOTE: COLUMNS MAY NOT EQUAL 100 PERCENT DUE TO "NO RESPONSE"

TABLE 8

TELEPHONE EQUIPMENT INSTALLER/REPAIRMAN JOBS
IN ORDER OF JOB DIFFICULTY INDEX

GROUP	JDI	AVERAGE NUMBER OF TASKS PERFORMED
170 OUTSIDE PLANT NCOIC's	20.7	168
121 TELEPHONE EQUIPMENT INSTALLER NCOIC's	16.9	92
019 SUPERVISORY PERSONNEL	16.2	74
163 INSTALLATION AND REPAIR PERSONNEL	14.6	88
053 LEASED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL	12.3	38
036 GOVERNMENT-OWNED TELEPHONE COMMUNICATIONS COORDINATOR PERSONNEL	10.8	35
007 TRAINING INSTRUCTORS	9.5	21
061 MOBILE COMMUNICATIONS CREWMEMBERS	8.4	61
002 QUALITY CONTROL NCOIC's	8.4	
099 TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS	7.4	37
059 CABLE AND WIRE INSTALLATION CREWMEMBERS	5.4	27
012 TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS	5.4	13

ANALYSIS OF DAFSC GROUPS

An analysis of DAFSC groups forms a part of each occupational analysis. The DAFSC analysis helps to identify differences among skill level groups within the 362X4 specialty. It also aids in the analysis of career ladder documents such as AFR 39-1 Specialty Descriptions and the Specialty Training Standard (STS).

The DAFSC analysis of the 362X4 specialty will discuss the duties and tasks common to the DAFSC groups, as well as discussing the tasks which best differentiate the 3-, 5-, and 7-skill level incumbents.

Skill Level Comparisons

As in most career ladders, the job performed by 3-skill level respondents is largely technical in nature. These incumbents spend 87 percent of their job time on technical duties, with three duties (installing and maintaining key telephone systems, installing and maintaining telephone systems inside wiring or equipment, and installing and repairing telephone system outside wiring) accounting for 65 percent of their total job time (see Table 9). Table 10 shows that most 36234 personnel were found in the Installation and Repair Personnel cluster. Table 11 lists those tasks performed by the highest percentage of 3-skill level respondents. These tasks involve mostly installation and maintenance functions and include installing and removing cable runs, connecting inside cables at connecting blocks, installing and removing connecting blocks, and installing and removing jumpers.

The picture does not change drastically at the 5-skill level. Table 9 shows that 5-skill level respondents spend about 70 percent of their job time on technical duties, with 49 percent of their job time being spent on those same three duties accounting for most of the average 3-skill level job time. Here again, Table 10 shows that most 36254 personnel were also found in the Installation and Repair Personnel cluster. Table 12 lists those tasks performed by the highest percentage of 5-skill level respondents. It is interesting to note that many of the installation and maintenance tasks performed by DAFSC 36254 personnel are performed by similar percentages of 3-skill level incumbents.

In a comparison of the duties and tasks performed by 3- and 5-skill level personnel, Table 13 indicates that installation and maintenance tasks are somewhat more representative of 3-skill level personnel while tasks involving directing and implementing are performed by a greater percentage of 5-skill level personnel.

The 36274 personnel take on more of a supervisory role, with 55 percent of their job time being spent on supervisory and administrative duties and duties of a more general nature. Three duties (organizing and planning, directing and implementing, and inspecting and evaluating) account for 37 percent of their job time. An examination of the representative tasks performed by 7-skill level respondents reveals that these incumbents typically perform such tasks as performing telephone pole climbing safety inspections,

counseling personnel on personal or military related problems, planning installation requirements, and writing correspondence. A substantial portion of the job time for 7-skill level personnel (38 percent) is still spent performing more technical duties. Table 15 lists the tasks that best differentiate 36254 and 36274 personnel. An examination of the table indicates that a greater percentage of 5-skill level personnel perform installation, maintenance, and repair tasks, while a greater percentage of 36274 personnel perform supervisory tasks. Indeed, Table 10 shows that most of the 36274 personnel were grouped in the Supervisory Personnel cluster.

Summary

An examination of the tasks and duties performed by the various 362X4 skill level groups reveals a wide variety of jobs are performed by the personnel in the career ladder. Three-skill level personnel are primarily technicians spending 85 percent of their job time on technical duties. DAFSC 36254 personnel also spend a majority of their time on technical tasks. Seven-skill level personnel spend a majority of their time performing supervisory duties but also spend a substantial percentage of time performing installation and maintenance duties.

TABLE 9
RELATIVE PERCENT TIME SPENT ON DUTIES BY DAFSC GROUPS

DUTIES	DAFSC 36234 PERSONNEL (N=95)	DAFSC 36254 PERSONNEL (N=446)	DAFSC 36274 PERSONNEL (N=187)
A ORGANIZING AND PLANNING	1	4	13
B DIRECTING AND IMPLEMENTING	1	4	12
C INSPECTING AND EVALUATING	*	3	12
D TRAINING	1	3	9
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	2	4	7
F PERFORMING GENERAL FUNCTIONS	6	6	7
G INSTALLING AND REPAIRING TELEPHONE SYSTEM OUTSIDE WIRING	13	11	4
H INSTALLING AND MAINTAINING TELEPHONE SYSTEMS INSIDE WIRING OR EQUIPMENT	24	16	6
I INSTALLING AND MAINTAINING KEY TELEPHONE SYSTEMS (KTS)	28	22	10
J PERFORMING BENCH REPAIR ON TELEPHONE SYSTEM COMPONENTS	8	7	3
K INSTALLING AND MAINTAINING SWITCHING UNITS OR SYSTEMS	2	3	2
L INSTALLING AND MAINTAINING SPECIAL CIRCUITS	4	4	2
M PROCESSING LEASED TELEPHONE EQUIPMENT	*	2	5
N PROCESSING GOVERNMENT OWNED TELEPHONE EQUIPMENT	*	1	4
O PERFORMING SITE SUPPORT FUNCTIONS	2	2	1
P PERFORMING CUSTOMER SERVICE AND JOB CONTROL FUNCTIONS	*	1	1
Q PERFORMING MOBILE COMMUNICATIONS FUNCTIONS	6	7	2

* DENOTES LESS THAN ONE PERCENT

TABLE 10
DISTRIBUTION OF SKILL LEVEL PERSONNEL ACROSS JOB GROUPS
(NUMBER OF MEMBERS)

	DAFSC 36234 PERSONNEL (N=95)	DAFSC 36254 PERSONNEL (N=446)	DAFSC 36274 PERSONNEL (N=187)
I. GOVERNMENT-OWNED TELEPHONE COMMUNICATIONS COORDINATORS	-	11	13
II. LEASED TELEPHONE COMMUNICATIONS COORDINATORS	-	23	21
III. SUPERVISORY PERSONNEL	-	9	57
IV. TRAINING INSTRUCTORS	1	18	8
V. QUALITY CONTROL NCOIC's	-	6	9
VI. INSTALLATION AND REPAIR PERSONNEL	62	249	35
VII. TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS	16	16	-
VIII. TELEPHONE EQUIPMENT INSTALLER NCOIC's	-	6	7
IX. OUTSIDE PLANT NCOIC's	-	7	18
X. CABLE AND WIRE INSTALLATION CREWMEMBERS	4	8	-
XI. MOBILE COMMUNICATIONS CREWMEMBERS	8	37	5
XII. TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS	1	15	1

* COLUMNS MAY NOT EQUAL 100 PERCENT DUE TO THOSE WHO DID NOT GROUP INTO ONE OF THE 12 GROUPS IDENTIFIED.

TABLE 11

REPRESENTATIVE TASKS PERFORMED BY DAFSC 36234 PERSONNEL

TASKS	PERCENT OF 3-SKILL LEVEL PERFORMING (N=95)
H179 INSTALL OR REMOVE CABLE RUNS	89
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	87
H180 INSTALL OR REMOVE CONNECTING BLOCKS	86
I205 INSTALL OR REMOVE JUMPERS	86
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	84
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	83
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	83
H183 INSTALL OR REMOVE INSIDE WIRING	82
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	79
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	77
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	77
J234 CLEAN TELEPHONE INSTRUMENT CASES	77
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	76
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	73
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	73
I204 INSTALL OR REMOVE FEEDER CABLES	73
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	73
G176 TEST OR VERIFY BASE CABLE PAIRS	72
I229 TERMINATE FEEDER CABLES	72
J236 ISOLATE FAULTS IN TELEPHONE SETS	72
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	71
I226 PERFORM OPERATIONAL CHECKS OF KTSs	71
H184 INSTALL OR REMOVE INSTRUMENTS FOR SECURE AREAS	69
G162 INSTALL OR REMOVE EXTERNAL WIRING	68
I222 ISOLATE MALFUNCTIONS IN KTS CABLES	68

TABLE 12
REPRESENTATIVE TASKS PERFORMED BY 36254 PERSONNEL

TASKS	PERCENT OF 5-SKILL LEVEL PERFORMING (N=446)
H179 INSTALL OR REMOVE CABLE RUNS	75
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	73
I205 INSTALL OR REMOVE JUMPERS	72
H180 INSTALL OR REMOVE CONNECTING BLOCKS	71
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	71
H183 INSTALL OR REMOVE INSIDE WIRING	70
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	70
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	69
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	69
J234 CLEAN TELEPHONE INSTRUMENT CASES	69
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	68
I204 INSTALL OR REMOVE FEEDER CABLES	67
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	67
J236 ISOLATE FAULTS IN TELEPHONE SETS	67
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	66
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	65
I229 TERMINATE FEEDER CABLES	64
G176 TEST OR VERIFY BASE CABLE PAIRS	63
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	63
I213 INSTALL OR REMOVE POWER SUPPLY CABLES	63
G162 INSTALL OR REMOVE EXTERNAL WIRING	62
I215 INSTALL OR REMOVE POWER SUPPLY UNITS	62
I226 PERFORM OPERATIONAL CHECKS OF KTSs	62
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	61
G159 CONNECT DROP WIRES TO TERMINALS	60

TABLE 13

TASKS WHICH BEST DIFFERENTIATE DAFSC 36234 AND 36254 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	3-SKILL LEVEL	5-SKILL LEVEL	DIFFERENCE
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	73	56	+17
H180 INSTALL OR REMOVE CONNECTING BLOCKS	86	71	+15
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	84	69	+15
I203 INSTALL OR REMOVE COLOR CODED BACKBOARDS	41	26	+15
I205 INSTALL OR REMOVE JUMPERS	86	72	+14
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	87	73	+14
H179 INSTALL OR REMOVE CABLE RUNS	89	75	+14
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	77	63	+14
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	83	69	+14
G165 INSTALL OR REMOVE LINE PROTECTORS	55	43	+12
H183 INSTALL OR REMOVE INSIDE WIRING	82	70	+12
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	83	71	+12
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	77	65	+12
B46 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36254)	4	26	-22
C73 PERFORM TELEPHONE POLE CLIMBING SAFETY INSPECTIONS	4	22	-18
D87 CONDUCT OJT	8	24	-16
B43 SUPERVISE APPRENTICE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALIST (AFSC 36234)	11	26	-15
B48 WRITE CORRESPONDENCE	1	16	-15
I218 INSTALL OR REMOVE SMALL 16C/RACKS	21	35	-14
A22 PLAN WORK ASSIGNMENTS	4	17	-13
D96 DIRECT OR IMPLEMENT OJT PROGRAMS	4	17	-13
F154 PREPARE WORK ORDERS	4	17	-13
I211 INSTALL OR REMOVE MEDIUM 26A/RACKS	20	33	-13
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	6	18	-12
A6 DETERMINE WORK PRIORITIES	3	14	-11
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	3	14	-11

TABLE 14

REPRESENTATIVE TASKS PERFORMED BY 36274 PERSONNEL

TASKS	PERCENT OF 7-SKILL LEVEL PERFORMING (N=187)
C73 PERFORM TELEPHONE POLE CLIMBING SAFETY INSPECTIONS	67
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	60
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	59
B48 WRITE CORRESPONDENCE	59
A6 DETERMINE WORK PRIORITIES	58
B46 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36254)	56
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	54
E114 ANNOTATE TELEPHONE EQUIPMENT KEY SYSTEM RECORD/ WORKSHEET FORMS (AFTO FORM 122)	52
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	52
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	51
B42 SCHEDULE WORK ASSIGNMENTS	51
C51 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	50
B28 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	49
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	49
D87 CONDUCT OJT	49
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	48
B40 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	48
D90 COUNSEL TRAINEES ON TRAINING PROGRESS	48
G175 PLAN LOCATIONS OF INSTRUMENTS WITH SUBSCRIBERS	48
A5 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	47
G174 PLAN LOCATIONS OF EQUIPMENT WITH SUBSCRIBERS	47
A21 PLAN TELEPHONE REPAIRS REQUIREMENTS	45
A25 SCHEDULE LEAVES OR PASSES	
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	44
H194 SURVEY FACILITIES FOR PLACEMENT OR EQUIPMENT AND CONNECTING BLOCKS	44

TABLE 15

TASKS WHICH BEST DIFFERENTIATE DAFSC 36254 AND 36274 PERSONNEL
(PERCENT MEMBERS PERFORMING)

TASKS	5-SKILL LEVEL	7-SKILL LEVEL	DIFFERENCE
G162 INSTALL OR REMOVE EXTERNAL WIRING	62	25	+37
G159 CONNECT DROP WIRES TO TERMINALS	60	24	+36
H179 INSTALL OR REMOVE CABLE RUNS	75	39	+36
J234 CLEAN TELEPHONE INSTRUMENT CASES	69	33	+36
G160 INSTALL OR REMOVE DROP WIRE BUILDING ATTACHMENTS	59	24	+35
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	71	36	+35
G161 INSTALL OR REMOVE DROP WIRES ON PROTECTORS	57	23	+34
H180 INSTALL OR REMOVE CONNECTING BLOCKS	71	38	+33
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	73	41	+32
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	65	33	+32
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	69	38	+31
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	56	25	+31
I204 INSTALL OR REMOVE FEEDER CABLES	67	36	+31
C74 PREPARE APRs	22	67	-45
B48 WRITE CORRESPONDENCE	16	59	-43
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	18	60	-42
B28 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	8	49	-42
B42 SCHEDULE WORK ASSIGNMENTS	11	51	-40
C51 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	11	50	-39
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	15	54	-39
A25 SCHEDULE LEAVES OR PASSES	7	45	-38
A6 DETERMINE WORK PRIORITIES	22	58	-36
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	14	49	-35
C53 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	8	43	-35
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	6	40	-34
D85 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	5	39	-34

COMPARISON OF SURVEY DATA TO AFR 39-1 SPECIALTY DESCRIPTIONS

Survey data for the 362X4 career ladder were compared to the AFR 39-1 Specialty Descriptions, dated 31 October 1980 (for DAFSC's 36234, 36254, and 36374). These descriptions were intended to give a broad overview of the duties and tasks required to be performed by various skill level personnel. Overall, the 3-, 5-, and 7-skill level descriptions were found to provide a clear, concise overview of the major duties performed by these incumbents.

ANALYSIS OF EXPERIENCE (TAFMS) GROUPS

In addition to the skill level analysis, survey respondents were examined on the basis of months of Total Active Federal Military Service (TAFMS). This analysis helps to determine how jobs and job perceptions change over time and can help to describe the types of jobs more junior 362X4 personnel can look forward to performing in the future.

As expected, no major deviations from the usual pattern of increasing time spent on supervisory duties with increasing months TAFMS were noted (see Table 16). For the most part, junior airmen spent more time performing installation or maintenance functions, while senior incumbents spent more time on organizing and planning, directing and implementing, and inspecting and evaluating. In fact, the percent time spent on supervisory duties (organizing and planning, directing and implementing, and inspecting and evaluating) shows a steady increase across TAFMS groups.

Installation, maintenance, and repair duties, on the other hand, comprise a majority (76 percent) of the job time for first enlistment personnel but show a steady decline across TAFMS groups until, by the time 241 months is reached, these duties account for no more than 14 percent of the job time.

First Enlistment Personnel

In addition to the general TAFMS analysis, first enlistment personnel were examined on the basis of tasks performed. Table 17 lists the tasks most commonly performed by first enlistment personnel. As previously stated, most of these tasks involve installation and maintenance.

In addition to the analysis of the common tasks performed, first enlistment personnel were also examined to determine which jobs they perform in the field. This analysis can aid training personnel in refining areas of instruction. Figure 2 shows first enlistment distribution across all major job groups identified in the CAREER LADDER STRUCTURE section.

Job Satisfaction Analysis

Job satisfaction indices for personnel with 1-48 months TAFMS, 49-96 months TAFMS, and 97+ months TAFMS were also examined. Job interest, perceived utilization of talents and training, and reenlistment intentions are presented in Table 18, along with comparative data for personnel from all related career fields sampled in 1980. In comparison with other similar career fields, 362X4 first and second enlistment personnel have high job satisfaction indicators. Job interest and utilization of talents and training for the 1-48 months and 49-96 months TAFMS groups are higher in all cases than those for the 1980 comparative samples. These same indicators are roughly comparable for the 97+ months TAFMS groups in both the present sample and 1980 sample.

The intention to reenlist figures for the current sample show a small percentage (31 percent) of first enlistment personnel planning to reenlist. Sixty-nine percent of 49-96 months TAFMS personnel plan to reenlist as do a similar percentage of 97+ months TAFMS personnel. The 1980 comparative sample shows a somewhat different pattern. A small percentage of first enlistment personnel plan to reenlist with this percentage increasing across TAFMS until 67 percent of the 97+ months personnel indicate that they plan to reenlist.

Overall, the most significant trends in job satisfaction (see Table 18) are the high positive response by first and second enlistment AFS 362X4 personnel. Of particular interest is the very high reenlistment intent for second term (49-96 months) 362X4 personnel; over 20 percent more Telephone Equipment Installer/Repairmen plan the career reenlistment than the average reenlistment intent for other specialties.

TABLE 16

RELATIVE PERCENT TIME SPENT ON DUTIES BY TAFMS GROUPS

DUTIES	MONTHS TAFMS					
	1-48 (N=293)	49-96 (N=169)	97-144 (N=94)	145-192 (N=90)	193-240 (N=64)	241+ (N=16)
A ORGANIZING AND PLANNING	2	5	7	10	14	23
B DIRECTING AND IMPLEMENTING	1	4	10	10	11	16
C INSPECTING AND EVALUATING	*	4	7	11	17	17
D TRAINING	1	5	7	8	9	7
E PREPARING AND MAINTAINING FORMS, RECORDS, AND REPORTS	2	5	7	8	9	6
F PERFORMING GENERAL FUNCTIONS	6	7	8	7	6	11
G INSTALLING AND REPAIRING TELEPHONE SYSTEM OUTSIDE WIRING	13	9	7	5	3	2
H INSTALLING AND MAINTAINING TELEPHONE SYSTEMS INSIDE WIRING OR EQUIPMENT	21	15	10	8	4	2
I INSTALLING AND MAINTAINING KEY TELEPHONE SYSTEMS (KTS)	27	23	14	11	6	4
J PERFORMING BENCH REPAIR ON TELEPHONE SYSTEMS COMPONENTS	8	6	5	2	3	3
K INSTALLING AND MAINTAINING SWITCHING UNITS OR SYSTEMS	2	3	2	1	*	2
L INSTALLING AND MAINTAINING SPECIAL CIRCUITS	5	4	2	2	*	1
M PROCESSING LEASED TELEPHONE EQUIPMENT	*	1	5	7	9	3
N PROCESSING GOVERNMENT OWNED TELEPHONE EQUIPMENT	*	1	1	5	4	1
O PERFORMING SITE SUPPORT FUNCTIONS	2	2	1	1	*	*
P PERFORMING CUSTOMER SERVICE AND JOB CONTROL FUNCTIONS	*	1	2	2	1	1
Q PERFORMING MOBILE COMMUNICATIONS FUNCTIONS	7	5	5	2	2	*

* DENOTES LESS THAN ONE PERCENT

TABLE 17

REPRESENTATIVE TASKS PERFORMED BY 362X4 INCUMBENTS
WITH 1-48 MONTHS TAFMS

TASKS	PERCENT MEMBERS PERFORMING (N=293)
H179 INSTALL OR REMOVE CABLE RUNS	86
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	82
I205 INSTALL OR REMOVE JUMPERS	82
H180 INSTALL OR REMOVE CONNECTING BLOCKS	81
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	80
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	79
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	78
H183 INSTALL OR REMOVE INSIDE WIRING	77
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	77
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	76
J234 CLEAN TELEPHONE INSTRUMENT CASES	76
J236 ISOLATE FAULTS IN TELEPHONE SETS	74
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	74
I204 INSTALL OR REMOVE FEEDER CABLES	74
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	74
G176 TEST OR VERIFY BASE CABLE PAIRS	72
G162 INSTALL OR REMOVE EXTERNAL WIRING	72
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	72
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	71
I229 TERMINATE FEEDER CABLES	70
G159 CONNECT DROP WIRES TO TERMINALS	69
I226 PERFORM OPERATIONAL CHECKS OF KTSs	68
G160 INSTALL OR REMOVE DROP WIRE BUILDING ATTACHMENTS	68
H184 INSTALL OR REMOVE INSTRUMENTS FOR SECURE AREAS	68
H187 INSTALL OR REMOVE TELEPHONE CABLE MOLDING	68

TABLE 18

JOB INTEREST, UTILIZATION OF TALENTS AND TRAINING, AND
REENLISTMENT INTENTIONS BY TAFMS GROUPS*

	1ST TERM		2ND TERM		CAREER	
	1-48 MOS TAFMS	1980 COMP SAMPLE**	49-96 MOS TAFMS	1980 COMP SAMPLE**	97+ MOS TAFMS	1980 COMP SAMPLE**
<u>I FIND MY JOB:</u>						
DULL	9	24	9	17	11	14
SO-SO	10	20	5	22	11	16
INTERESTING	80	56	84	61	75	70
<u>MY JOB UTILIZES MY TALENTS:</u>						
NOT AT ALL TO VERY LITTLE	15	37	14	31	21	24
FAIRLY WELL OR BETTER	84	63	85	69	77	76
<u>MY JOB UTILIZES MY TRAINING:</u>						
NOT AT ALL TO VERY LITTLE	21	30	21	28	27	25
FAIRLY WELL OR BETTER	79	69	77	72	71	74
<u>I PLAN TO REENLIST:</u>						
NO RETIRE	1	-	1	-	23	-
NO OR PROBABLY NO	67	66	29	51	10	33
YES OR PROBABLY YES	31	33	69	48	66	67

* COLUMNS MAY NOT TOTAL 100 PERCENT FOR EACH QUESTION DUE TO NO RESPONSE BY A FEW INDIVIDUALS

**COMPARATIVE SAMPLE INCLUDES ALL NONLATERAL AFSC's SURVEYED IN 1980; INCLUDES AFSCs 30XXX, 31XXX, 32XXX, 34XXX, 36XXX, 40XXX, 42XXX, 43XXX, 44XXX, AND 46XXX

TRAINING ANALYSIS

Occupational survey data is one of the many sources of information that can be used to help make training programs more meaningful. Factors provided in occupational surveys that can be used in evaluating training are percent of first enlistment members performing tasks, utilization of equipment available at the technical school for training, task difficulty ratings, and training emphasis ratings. These factors can be used in evaluating the Specialty Training Standard (STS) and Plan of Instruction (POI) for the 362X4 specialty. Technical school personnel at Sheppard AFB TX matched inventory tasks to areas of instruction outlined in the STS, dated August 1978, and the POI for course J3ABR36234, dated May 1980. A complete computer listing of the percent members performing, task difficulty, and training emphasis ratings for each task statement along with the STS and POI matching has been forwarded to the technical school for their use in reviewing training documents. A summary of that information is presented below.

Analysis of Task Difficulty

The relative difficulty of each task in the task inventory was assessed through ratings by 43 7-skill level 362X4 NCOs. These tasks were processed to produce an ordered listing of all tasks in terms of their relative difficulty and were standardized to have an average difficulty of 5.0 (with a standard deviation of 1.0).

Most of the tasks rated high in task difficulty are installation and maintenance oriented and involve isolating malfunctions in various switching systems. Tasks typically rated the most difficult include isolating malfunctions in AN/GTC 28 switching systems, isolating malfunctions in 302A switching systems, and isolating malfunctions in switching system facilities. Overall, most of the most difficult tasks are performed by less than 20 percent of the total sample.

Most of the tasks rated average in difficulty are supervisory or administrative in nature and include scheduling work assignments, evaluating security programs, and compiling equipment operation reports. Here, again, most of the tasks rated average in difficulty are performed by less than 20 percent of the total sample.

Most of the tasks rated low in difficulty are installation and maintenance tasks. A number of field or mobile communications systems maintenance tasks were found. Typical tasks include installing or removing external wiring, terminating field phone wiring, and performing dial speed operation checks of instruments. As expected, a larger percentage of 362X4 personnel perform these tasks than the tasks rated most difficult or average in difficulty.

Analysis of Training Emphasis

The relative training emphasis of each task in the inventory was assessed through ratings of 39 experienced 7-skill level 362X4 personnel. These ratings were processed to produce an ordered listing of all tasks in terms of their recommended emphasis in training for first enlistment personnel. These ratings had an average rating of 2.24 and a standard deviation of 1.86.

Table 19 lists those tasks that senior 362X4 personnel perceived most necessary to be trained, along with task difficulty ratings for these tasks. These tasks almost exclusively involved installation and maintenance. These tasks typically included isolating faults in telephone sets, isolating malfunctions in KTS cables, and isolating malfunctions in inside wiring. High percentages of first-term personnel are indicated as performing these tasks.

Analysis of the 362X4 Specialty Training Standard

The 362X4 Specialty Training Standard (STS), dated August 1978, was reviewed for 3-, 5-, and 7-skill level Telephone Equipment Installation/Repair personnel. Subject matter specialists at the Sheppard Technical Training Center assisted in the analysis by matching job inventory tasks to specific paragraphs in the STS. Each paragraph in the STS that required specific task knowledge and task performance criteria was examined with matched job inventory tasks and task difficulty, training emphasis, and percent members performing information. For the 362X4 specialty, the STS was found to give a broad overview of the career ladder. There were a number of unreferenced tasks, however, and Table 20 lists 21 of these tasks with over 30 percent 36234 members performing. Most of these tasks involve the installation and maintenance of special circuits, such as high speed data lines and fire reporting circuits.

Table 21 lists those pieces of equipment which appear in the STS and the percentages of 3-, 5-, and 7-skill level members, and first-term enlistment members using these pieces of equipment. As can be seen in the table, the 1A1, 1A2, and 6A Key Telephone Systems are all specifically listed in the STS and all are covered in the ABR course. At each skill level and in the first enlistment, the 1A1 and 1A2 systems are being used by higher percentages of members than is the 6A system.

Analysis of the 362X4 Plan of Instruction

The Plan of Instruction (POI) for course J3ABR36234, dated May 1980, was reviewed in light of occupational data for first enlistment personnel. As with the STS, subject matter specialists at the Sheppard Technical Training Center also assisted in the analysis by matching job inventory tasks to specific criterion objectives in the J3ABR36234 POI. In addition, each criterion objective was examined based upon task difficulty, training emphasis, and percent members performing vectors to determine if the survey data supports the basic 36234 course. Table 22 lists 35 tasks not referenced

to any criterion objective in the POI with 30 percent or more members performing. These tasks, for the most part, include those involving the installation and maintenance of special circuits and Key Telephone Systems. While this list does include tasks that would not be taught in a resident course (e.g., J234, Clean Telephone Instrument Cases), there are other un referenced tasks involving installation and maintenance of specific pieces of equipment and the appearance of such tasks might indicate that the resident course should be reviewed. To this end, computer printouts have been provided to technical school personnel in order to refine and validate the J3ABR36234 resident course.

Table 23 lists those pieces of equipment which appear in the POI (i.e., that equipment that resident course students receive training on) and the percentages of 3-, 5-, and 7-skill level members and first-term enlistment members using these pieces of equipment. It should be noted that the POI contains several blocks of instruction on the 6A KTS for a total of 69 hours in course time. Yet, as can be seen in Appendix B, there are very few pieces of 6A KTS are used by 30 percent or more of the members of any DAFSC, TAFMS, or functional group. On the other hand, a number of pieces of 1A1 and 1A2 equipment are reported as being used by 30 percent or more of the members of all the groups displayed in Appendix B. As Table 23 indicates, however, only three 1A1 components are specifically taught in the course. These two facts would indicate that the course content and the relative emphasis placed upon instruction in the various systems should be reviewed by technical school personnel.

TABLE 19

TASKS RATED HIGHEST IN TRAINING EMPHASIS BY DAFSC 362X4 PERSONNEL

TASK	TRAINING EMPHASIS	TASK DIFFICULTY	PERCENT FIRST ENLISTMENT MEMBERS PERFORMING (N=293)
J236 ISOLATE FAULTS IN TELEPHONE SETS	6.57	5.70	74
I222 ISOLATE MALFUNCTIONS IN KTS CABLES	6.54	6.25	62
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTU)	6.51	5.59	74
I223 ISOLATE MALFUNCTIONS IN KTSs	6.49	6.53	62
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	6.37	3.99	78
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	6.34	5.12	74
I205 INSTALL OR REMOVE JUMPERS	6.34	5.12	82
E114 ANNOTATE TELEPHONE EQUIPMENT KEY SYSTEM RECORD/ WORKSHEET FORMS (AFTO FORM 122)	6.29	4.21	41
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	6.29	5.27	72
H179 INSTALL OR REMOVE CABLE RUNS	6.23	3.78	86
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	6.23	5.67	76
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	6.20	4.30	77
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	6.17	3.73	82
H183 INSTALL OR REMOVE INSIDE WIRING	6.03	3.57	77
I229 TERMINATE FEEDER CABLES	6.03	4.67	70
I230 TERMINATE KEY DISTRIBUTION CABLES	6.03	4.62	59
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	6.00	4.16	49
H180 INSTALL OR REMOVE CONNECTING BLOCKS	6.00	3.31	81
I227 PREPARE STRAPPING SHEETS FOR KTS INSTALLATIONS	5.97	5.97	51
G176 TEST OR VERIFY BASE CABLE PAIRS	5.94	3.70	72
I204 INSTALL OR REMOVE FEEDER CABLES	5.94	3.86	74
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	5.94	4.12	64
I221 ISOLATE MALFUNCTIONS IN KEY TELEPHONE UNITS (KTU)	5.94	6.67	62
G162 INSTALL OR REMOVE EXTERNAL WIRING	5.80	3.43	72
J237 ISOLATE KEY TELEPHONE CABINET WIRING PROBLEMS	5.80	6.71	52

TABLE 20

TASKS NOT REFERENCED TO SPECIALTY TRAINING STANDARD WITH 30 PERCENT OR MORE 36234 MEMBERS PERFORMING

TASKS	PERCENT 36234 MEMBERS PERFORMING	PERCENT 36254 MEMBERS PERFORMING	PERCENT 36274 MEMBERS PERFORMING
J234 CLEAN TELEPHONE INSTRUMENT CASES	77	69	33
H181 INSTALL OR REMOVE EXTERNAL SIGNALING DEVICES	66	57	34
L269 INSTALL OR REMOVE COMPUTER REMOTE CIRCUITS	54	50	24
H190 MODIFY INSTRUMENTS FOR SECURE AREAS	53	47	26
J237 ISOLATE KEY TELEPHONE CABINET WIRING PROBLEMS	52	51	34
L275 INSTALL OR REMOVE RADIO CIRCUITS	47	46	25
J238 ISOLATE MALFUNCTIONS IN TELEPHONE SYSTEM POWER SUPPLY UNITS	43	39	29
I195 ADJUST KTS EQUIPMENT	42	36	21
L277 MAINTAIN COMPUTER REMOTE CIRCUITS	41	39	21
G166 INSTALL OR REMOVE MULTIPLE PAIR PROTECTED TERMINALS	40	31	14
O307 INSTALL JUMPERS AT MAIN DISTRIBUTION FRAME (MDF)	40	35	13
J242 REHABILITATE WIRING IN KEY TELEPHONE CABINETS	38	42	27
L283 MAINTAIN RADIO CIRCUITS	37	36	19
I197 ADJUST KTS RELAYS MECHANICALLY	36	31	22
L271 INSTALL OR REMOVE FIRE ALARMS	35	33	17
L272 INSTALL OR REMOVE FIRE REPORTING CIRCUITS	33	31	17
L273 INSTALL OR REMOVE HIGH SPEED DATA LINES	32	31	19
O321 REMOVE OR REPLACE JUMPERS AT MDF	32	27	14
Q345 INSTALL OR REMOVE JUMPERS AT INTERMEDIATE DISTRIBUTION FRAMES (IDF)	32	29	2
G169 INSTALL OR REMOVE WD-1 FIELD WIRE	30	32	14
J235 INSTALL OR REMOVE COMPONENTS OF TELEPHONE SYSTEM POWER SUPPLY UNITS	30	29	21

TABLE 21

EQUIPMENT LISTED IN 362X4 SPECIALTY TRAINING STANDARD

<u>EQUIPMENT</u>	<u>PERCENTAGE 36234 PERSONNEL USING</u>	<u>PERCENTAGE 36254 PERSONNEL USING</u>	<u>PERCENTAGE 36274 PERSONNEL USING</u>	<u>PERCENTAGE FIRST ENLISTMENT PERSONNEL USING</u>
*1A1 KEY TELEPHONE SYSTEMS	63	62	45	68
*1A2 KEY TELEPHONE SYSTEMS	74	77	56	80
*6A KEY TELEPHONE SYSTEMS	49	37	25	46
302 SWITCH UNITS	43	48	35	33
AN/GTC-28 SWITCH UNITS	44	46	35	30

*TAUGHT IN ABR COURSE

TABLE 22

TASKS NOT REFERENCED TO PLAN OF INSTRUCTION J3ABR36234 WITH 30
PERCENT OR MORE FIRST ENLISTMENT MEMBERS PERFORMING

TASKS	PERCENT MEMBERS PERFORMING
I210 INSTALL OR REMOVE LARGE 7 FOOT CABINETS	79
J234 CLEAN TELEPHONE INSTRUMENT CASES	77
H184 INSTALL OR REMOVE INSTRUMENTS FOR SECURE AREAS	68
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	67
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	67
H181 INSTALL OR REMOVE EXTERNAL SIGNALING DEVICES	66
G167 INSTALL OR REMOVE OUTSIDE SUB-STATION INSTRUMENTS	57
H187 INSTALL OR REMOVE TELEPHONE CABLE MOLDING	57
L269 INSTALL OR REMOVE COMPUTER REMOTE CIRCUITS	54
F148 LOAD OR UNLOAD SERVICE VEHICLES	53
H190 MODIFY INSTRUMENTS FOR SECURE AREAS	53
J237 ISOLATE KEY TELEPHONE CABINET WIRING PROBLEMS	52
L275 INSTALL OR REMOVE RADIO CIRCUITS	47
J238 ISOLATE MALFUNCTIONS IN TELEPHONE SYSTEM POWER SUPPLY UNITS	43
I195 ADJUST KTS EQUIPMENT	42
K253 INSTALL OR REMOVE AUDIBLE SIGNAL DEVICES	41
L277 MAINTAIN COMPUTER REMOTE CIRCUITS	41
G166 INSTALL OR REMOVE MULTIPLE PAIR PROTECTED TERMINALS	40
O307 INSTALL JUMPERS AT MAIN DISTRIBUTION FRAMES (MDF)	40
I228 PREPARE STRAPPING SHEETS FOR KTS MODIFICATIONS	37
L283 MAINTAIN RADIO CIRCUITS	37
F147 INTERPRET LAYOUT DRAWINGS	36
I197 ADJUST KTS RELAYS MECHANICALLY	36
L271 INSTALL OR REMOVE FIRE ALARMS	35
L272 INSTALL OR REMOVE FIRE REPORTING CIRCUITS	33
I203 INSTALL OR REMOVE COLOR CODED BACKBOARDS	32
I210 INSTALL OR REMOVE LARGE 7 FOOT CABINETS	32
K254 INSTALL OR REMOVE CONSOLE LAMPS	32
L273 INSTALL OR REMOVE HIGH SPEED DATA LINES	32
O321 REMOVE OR REPLACE JUMPERS AT MDF	32
Q345 INSTALL OR REMOVE JUMPERS AT INTERMEDIATE DISTRIBUTION FRAMES (IDF)	32
F146 INTERPRET INSTALLATION SITE DIAGRAMS	31
G169 INSTALL OR REMOVE WD-1 FIELD WIRE	30
I216 INSTALL OR REMOVE SATELLITE BOARDS	30
J235 INSTALL OR REMOVE COMPONENTS OF TELEPHONE SYSTEM POWER SUPPLY UNITS	30

TABLE 23

EQUIPMENT COMPONENTS LISTED IN PLAN OF INSTRUCTION (COURSE J3ABR36234)

<u>EQUIPMENT COMPONENTS</u>	<u>PERCENTAGE 36234 PERSONNEL USING</u>	<u>PERCENTAGE 36254 PERSONNEL USING</u>	<u>PERCENTAGE 36274 PERSONNEL USING</u>	<u>PERCENTAGE FIRST ENLISTMENT PERSONNEL USING</u>
*207C (1A1 SYSTEM)	53	52	39	58
*205A (1A1 SYSTEM)	25	29	24	30
*203A (1A1 SYSTEM)	26	30	26	32
*224B (6A SYSTEM)	14	9	9	12
*217B (6A SYSTEM)	8	6	6	8

*TAUGHT IN ABR COURSE

METHODS OF POLE CLIMBING

The issue of pole climbing was one of importance to the technical school personnel. Specifically, the areas of interest were those personnel who climb telephone poles in the performance of their duty and the climbing methods used. Four methods were identified: the gaff method, the stepped method, the ladder, and the cherry picker (power lift truck).

Table 24 shows methods of pole climbing and frequency of each method used across TAFMS groups. For each of the three enlistment groups, the ladder and gaff are the most frequently used methods, respectively. Most first enlistment personnel report using the ladder 1-10 times weekly but, for the most part, most first enlistment personnel are using the other methods no more than 1-6 times per year. In the other enlistment groups all methods are used for the most part, an average of 1-6 times per year. In each of the three enlistment groups, most personnel do not report climbing over 30 feet in the performance of their duty. A decreasing trend in pole climbing across TAFMS groups was also seen.

TABLE 24

METHODS OF POLE CLIMBING AND BACKGROUND INFORMATION BY TAFMS GROUPS
(NUMBER RESPONDING)

	<u>1-48 MOS</u>	<u>49-96 MOS</u>	<u>97+ MOS</u>
<u>WHICH METHOD OF POLE CLIMBING DO YOU USE?</u>			
LADDER METHOD	194	93	80
GAFF METHOD	164	81	73
STEPPED METHOD	117	62	56
CHERRY PICKER	19	8	17
<u>HOW OFTEN DO YOU USE THE LADDER METHOD?</u>			
1-10 TIMES WEEKLY	87	34	22
1-3 TIMES MONTHLY	44	11	12
4-10 TIMES MONTHLY	12	7	7
1-6 TIMES YEARLY	51	41	39
<u>HOW OFTEN DO YOU USE THE GAFF METHOD?</u>			
1-3 TIMES WEEKLY	7	7	6
4-10 TIMES WEEKLY	1	-	-
1-3 TIMES MONTHLY	24	14	9
4-10 TIMES MONTHLY	1	2	1
1-6 TIMES YEARLY	131	58	57
<u>HOW OFTEN DO YOU USE THE STEPPED METHOD?</u>			
1-3 TIMES WEEKLY	9	7	8
4-10 TIMES WEEKLY	2	3	1
1-3 TIMES MONTHLY	18	7	8
4-10 TIMES MONTHLY	7	1	1
1-6 TIMES YEARLY	81	44	38
<u>HOW OFTEN DO YOU USE THE CHERRY PICKER?</u>			
1-3 TIMES WEEKLY	2	-	1
4-10 TIMES WEEKLY	-	-	-
1-3 TIMES MONTHLY	-	-	1
4-10 TIMES MONTHLY	1	-	-
1-6 TIMES YEARLY	16	8	15
<u>PERCENT CLIMBING OVER 30 FT. IN PERFORMANCE OF DUTY:</u>			
	31%	23%	19%

ANALYSIS OF CONUS VERSUS OVERSEAS GROUPS

A comparison was made of the tasks performed and the background data for DAFSC 36254 personnel assigned within the CONUS versus those at overseas locations. For the most part, there does not appear to be much difference between the two groups in terms of the tasks performed and the time spent performing tasks. Both groups primarily perform installation, repair, and maintenance tasks including installing or removing cable runs, installing or removing connecting blocks, isolating faults in telephone sets, and terminating feeder cables (see Table 25).

Various background and job satisfaction information for CONUS and overseas respondents were also examined, and no major differences were noted. Overseas incumbents perform an average of 19 more tasks and have an average of ten more months in the service than do CONUS incumbents. In addition, overseas respondents are higher on all measures of job satisfaction, but there is no significant difference in percent planning to reenlist between CONUS and overseas respondents.

Table VII in Appendix B shows equipment used by at least 30 percent of CONUS 36254 respondents, and Table VIII shows equipment used by at least 30 percent of the 36254 respondents assigned overseas. As the tables illustrate, the overseas respondents utilize more pieces of equipment than do the CONUS personnel; but in both cases, the majority of the equipment used is made up of components of 1A1 and 1A2 Key Telephone Systems.

TABLE 25

TASKS WHICH BEST DIFFERENTIATE DAFSC 36254 CONUS AND OVERSEAS PERSONNEL
(PERCENT MEMBERS RESPONDING)

TASKS	CONUS	OVERSEAS	DIFFERENCE
G168 INSTALL OR REMOVE TELEPHONE POLE DROP HARDWARE	48	32	+16
G166 INSTALL OR REMOVE MULTIPLE PAIR PROTECTED TERMINALS	34	20	+14
I209 INSTALL OR REMOVE LAMP EXTENDERS	25	13	+12
G161 INSTALL OR REMOVE DROP WIRES ON PROTECTORS	59	48	+11
G159 CONNECT DROP WIRES TO TERMINALS	62	52	+10
E114 ANNOTATE TELEPHONE EQUIPMENT KEY SYSTEM RECORD/WORKSHEET FORMS (AFTO FORM 122)	43	70	-27
I198 ASSIGN STATION CODES IN TELEPHONE SETS	43	67	-24
I200 DEMONSTRATE KTS CAPABILITIES	43	67	-24
E112 ANNOTATE IN-HOUSE CABLE RECORDS	20	43	-23
I199 BRIEF SUBSCRIBERS ON KTS FUNCTIONS	48	70	-22
J242 REHABILITATE WIRING IN KEY TELEPHONE CABINETS	36	58	-22
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	30	50	-20
I222 ISOLATE MALFUNCTIONS IN KTS CABLES	53	73	-20
I223 ISOLATE MALFUNCTIONS IN KTSs	53	73	-20
E113 ANNOTATE INTERMEDIATE-CROSS CONNECT SHEETS	16	35	-19

ANALYSIS OF WRITE-IN COMMENTS

As in most occupational surveys, respondents were invited to write in any comments they had relative to their job. A number of individuals used the opportunity to voice specific dissatisfactions with the career ladder. While such comments may not reflect the opinions of a majority of career field incumbents, they may be useful in pinpointing problems within some of the functional groups and areas that need to be covered at the technical school. A major complaint seemed to be that Mobile Communications Crewmembers do not feel that they are being trained at the technical school for the job they perform in the field and, thus, are dissatisfied with their jobs. Typical comments include:

"...this questionnaire is not a true picture of myself or my AFSC due to my unit being a mobile one and having very primitive equipment...(we are) severely handicapped when it comes to promotions due to lack of hands on experience with equipment."

"A Mobile Unit is no place for a first-termer. All the knowledge received in Technical School is put to waste."

"I am in the 'mob'. We do not use the skills learned in Tech School."

"I feel I'm being terribly misassigned at my present position."

A similar complaint was voiced by TOPS Installers:

"I work at ----- . We install TOPS intercom. This system is unique...We do not install any telephone equipment."

Finally, some suggestions were made as to how the course at the Technical School could be improved. Typical of these comments was:

"362X4 personnel are not taught enough solid state theory and troubleshooting...if our people were taught more they could repair items locally and benefit from the experience."

COMPARISON TO PREVIOUS SURVEY

The results of this 362X4 survey were compared to those of a previous Occupational Survey Report, AFPT 90-362-205, dated January 1977. The previous survey sampled 740 incumbents including a small group of 9-level personnel. For the most part, the two studies reported relatively consistent findings. No new functional areas were noted. Twelve independent job types or clusters were identified in the present study and thirteen in the previous study, but the functional areas were essentially the same. Table 26 provides a comparison of the career ladder structure for the present study and the career ladder structure for the 1977 study. As the table shows, only three independent job types in the present study cannot be matched with job groups or clusters in the previous study in terms of the tasks and duties performed. The duties of these three groups (Outside Plant NCOIC's and Cable and Wire Installation Crewmembers, and Telephone Equipment Installer NCOIC's) were performed by a number of groups in the 1977 sample.

A thorough analysis of the tasks performed and job satisfaction data for the various DAFSC and TAFMS groups reveals some interesting trends. The DAFSC 36234 and 36254 respondents in both studies perform technical tasks while 7-skill level incumbents perform a greater number of supervisory and administrative duties. Yet, 36274 incumbents in the present study are performing more supervisory tasks than their counterparts in the previous sample. With regard to the TAFMS groups, the same trend was revealed in both studies: the percentage of time spent on supervisory tasks increases with increasing time in service. A high degree of job satisfaction was noted for all TAFMS groups in both studies. Both studies showed minimal differences between CONUS and overseas groups.

A review of job satisfaction indicators for the clusters and independent job types for both groups reveals some interesting findings. Table 27 lists job satisfaction indicators for those groups in the present study for which there is a counterpart in the 1977 study. Personnel in the Transistorized Operation Phone System (TOPS) functional area are less satisfied with their jobs in the present study than were their 1977 counterparts. Mobile Communications Crewmembers in the present study also exhibit marked dissatisfaction with their jobs while the two mobile communications groups showed varying degrees of dissatisfaction with their jobs. Both the Mobile Communications and TOPS personnel use equipment that differs significantly from that used by the rest of the career field. Finally, many Leased Telephone Communications Coordinators in the present study feel that their job does not utilize their talents and training while their counterparts in the 1977 study, for the most part, felt that their talents and training were being well utilized.

TABLE 26

COMPARISON OF CAREER LADDER STRUCTURE FOR 1977 AND 1981 STUDIES

1981 STUDY (N=731)	PERCENT	1977 STUDY (N=740)	PERCENT
I. GOVERNMENT OWNED TELEPHONE COMMUNICATIONS COORDINATORS	3	LEASED TELEPHONE COMMUNICATIONS MONITORS	5
II. LEASED TELEPHONE COMMUNICATIONS COORDINATORS	6		
III. SUPERVISORY PERSONNEL	9	TELEPHONE SUPERINTENDENTS	5
		FIRSTLINE SUPERVISORS	6
IV. TRAINING INSTRUCTORS	3	FORMAL TRAINING INSTRUCTORS	2
V. QUALITY CONTROL NCOIC's	2	QUALITY CONTROL TECHNICIANS	1
VI. INSTALLATION AND REPAIR PERSONNEL	47	INSTALLATION & REPAIR CREWMEMBERS	60
VII. TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS	4	INSTALLATION & REPAIR NEW CREWMEMBERS	1
		INSTALLATION & REPAIR JUNIOR CREWMEMBERS	1
VIII. TELEPHONE EQUIPMENT INSTALLER NCOIC's	1	NOT MATCHED	
IX. OUTSIDE PLANT NCOIC's	3	NOT MATCHED	
X. CABLE AND WIRE INSTALLATION CREWMEMBERS	1	NOT MATCHED	
XI. MOBILE COMMUNICATIONS CREWMEMBERS	6	3RD, 4TH, & 5TH MOBILE COMMUNICATIONS GRPS (2 JOB TYPES)	4
XII. TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS	2	TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS	1
NOT MATCHED		BENCH STOCK AND SUPPLY SPECIALISTS	1
NOT MATCHED		NCMO CONTROL SPECIALISTS	1

TABLE 27

JOB SATISFACTION AND RELATED DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES IN
1977 AND 1981 SAMPLES
(PERCENT MEMBERS RESPONDING)

	GOVT OWNED TELEPHONE COORDINATORS		LEASED TELEPHONE COORDINATORS		LEASED TELEPHONE COMMUNICATIONS COORDINATORS		TELEPHONE SUPERINTENDENTS		FIRSTLINE SUPERVISORS		TRAINING INSTRUCTORS		FORMAL TRAINING INSTRUCTORS	
	1981		1981		1977		1977		1977		1981		1977	
I FIND MY JOB:														
DULL	4		29		26		7		7		15		12	
SO-SO	17		20		16		7		9		11		-	
INTERESTING	79		51		58		86		84		70		88	
MY JOB UTILIZES														
MY TALENTS:														
NOT AT ALL TO VERY														
LITTLE	8		49		17		10		13		19		12	
FAIRLY WELL OR BETTER	92		51		83		90		87		81		88	
MY JOB UTILIZES														
MY TRAINING:														
NOT AT ALL TO VERY														
LITTLE	29		78		20		10		17		22		12	
FAIRLY WELL OR BETTER	71		22		80		90		83		78		88	

TABLE 27 (CONTINUED)

JOB SATISFACTION AND RELATED DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES IN
1977 AND 1981 SAMPLES
(PERCENT MEMBERS RESPONDING)

	QUALITY CONTROL		TELEPHONE EQUIPMENT INSTALLER CREWMEMBERS 1981	INSTALLATION AND REPAIR PERSONNEL 1981		INSTALLATION AND REPAIR CREWMEMBERS 1977		INSTALLATION & REPAIR NEW CREWMEMBERS 1977	
	NCOs 1981	TECHNICIANS 1977							
<u>I FIND MY JOB:</u>									
DULL	27	-		2	3	4	-	10	
SO-SO	13	-		6	3	7	23	30	
INTERESTING	60	100		91	85	89	75	60	
<u>MY JOB UTILIZES MY TALENTS:</u>									
NOT AT ALL TO VERY LITTLE	47	-		6	6	8	38	20	
FAIRLY WELL OR BETTER	53	100		93	94	92	62	80	
<u>MY JOB UTILIZES MY TRAINING:</u>									
NOT AT ALL TO VERY LITTLE	40	-		7	9	8	38	30	
FAIRLY WELL OR BETTER	60	100		92	88	92	62	70	

TABLE 27 (CONTINUED)

JOB SATISFACTION AND RELATED DATA FOR CLUSTERS AND INDEPENDENT JOB TYPES IN
1977 AND 1981 SAMPLES
(PERCENT MEMBERS RESPONDING)

	MOBILE COMMUNICATIONS CREW MEMBERS		INSTALLATION AND REPAIR CREW MEMBERS (THIRD AND FOURTH MOBILE COMM GROUP)		INSTALLATION AND REPAIR CREW MEMBERS (FIFTH MOBILE COMM GROUP)		TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS		TRANSISTORIZED OPERATION PHONE SYSTEM (TOPS) INSTALLERS	
	1981	1977	1977	1977	1977	1977	1981	1977	1981	1977
I FIND MY JOB:										
DULL	47	29	39	24	22					
SO-SO	10	21	-	35	11					
INTERESTING	41	50	41	41	67					
MY JOB UTILIZES MY TALENTS:										
NOT AT ALL TO VERY LITTLE	67	43	82	47	44					
FAIRLY WELL OR BETTER	33	50	18	53	56					
MY JOB UTILIZES MY TRAINING:										
NOT AT ALL TO VERY LITTLE	84	52	82	82	78					
FAIRLY WELL OR BETTER	16	42	18	18	22					

IMPLICATIONS

The present study of the Telephone Equipment Installer/Repairman career ladder was designed to provide information concerning new equipment, systems, and components in use, the users of such equipment, personnel who climb telephone poles in the performance of their duty, and the methods used to climb poles. Some interesting information concerning these issues was provided as well as information concerning other issues such as job satisfaction and career ladder structure.

The Telephone Equipment Installer/Repairman career ladder contains a wide variety of jobs which can be loosely grouped into three functional areas: Communications Coordination; Supervision and Instruction; and Installation, Maintenance, and Repair. The career ladder has remained relatively stable since the last Occupational Survey Report of the 362X4 career field. No new functional areas have been added, and job satisfaction indicators and reenlistment intentions have stayed relatively constant.

With regard to the equipment used by various clusters and independent job types, of the seven groups that report using any of the equipment listed in the inventory, most reported using 1A1 and 1A2 Key Telephone Systems and components of these systems. Only one cluster (Installation and Repair Personnel) reported using any 6A KTS equipment. Of the seven groups that use equipment, all report using test equipment, but, for the most part, only two pieces, the Amphenol Plug Cable Maker and PSM-6, are used by a high percentage of personnel. Thus, while the inventory listed over 10 individual telephone systems and over 100 components or pieces of equipment identified with the career field, a relatively limited proportion of this equipment is reported as being used by more than 30 percent of any of the job groups in the career field. The job groups that report using no equipment appear for the most part to be composed of more senior NCO's (E-5 and over).

Further, the analyses of the STS and POI showed a fairly high number of tasks unreferenced to these training documents. While some of the tasks would have no place in a resident course, other unreferenced tasks involve the installation and maintenance of various components and this might indicate a need to review course content. The findings also show that, while fully 69 hours of course time are spent on the 6A Key Telephone System, very few 6A KTS components are reported as being used by over 30 percent of any of the groups. Conversely, many 1A1 and 1A2 Key Telephone System equipment are used by over 30 percent of many of the groups in this study yet only a few pieces of 1A1 equipment are specifically taught in the course. These two findings would also point to a need to review the course.

The issue of telephone pole climbing was one of particular importance to the technical school personnel. The results of the present study showed that over 80 percent of first-enlistment personnel do perform pole climbing in the performance of their jobs. Most, however, do not climb higher than 30 feet. Although the ladder is the most commonly used method, most of the personnel who report using the method use it no more than 1-6 times yearly. This is also true of the personnel who report using the gaff, stepped, and cherry picker methods of climbing. This information may be of use to technical school personnel in evaluating the pole climbing content of course J3ABR36234.

A review of the job satisfaction indicators for job types and cluster identified in the report revealed no significant changes since the last Occupational Survey Report. For the most part, all of the job groups identified seemed fairly satisfied with their jobs and felt that their training and talents were well-utilized. Two independent job types, Mobile Communications Crewmembers and TOPS Installers, provided a notable exception. Both groups voiced dissatisfaction with their jobs and low reenlistment intentions. Both groups employ equipment that is unique from that used by the rest of the career field. A number of the Mobile Communications personnel assert that a lack of "hands-on" experience with the equipment used by the rest of the career field blocks their promotional opportunities. Certainly, this is indicative of a training-related problem, but the fact that both Mobile Communications and TOPS personnel make up only eight percent of the career field would make training on these types of equipment in the basic course less than cost-effective. In the case of the Mobile Communications personnel, this dissatisfaction mirrors the dissatisfaction seen in mobile groups in other career fields. A possible step that could be taken to alleviate this dissatisfaction could be to convene a conference between technical school personnel and interested Mobile Communications personnel for the purpose of discussing this and related issues. Another, more concrete step might be the publication of a CDC supplement on the Mobile Communications job. Certainly, these and other ideas bear consideration as this problem has existed at least since the previous Occupational Survey Report. Similar steps need to be considered also for the TOPS installers.

APPENDIX A

TABLE I
 REPRESENTATIVE TASKS PERFORMED BY GOVERNMENT OWNED
 TELEPHONE COMMUNICATION COORDINATORS
 (GRP036)

TASKS	PERCENT MEMBERS PERFORMING (N=24)
E121 PREPARE LOCAL COMMUNICATIONS SERVICE ORDER FORMS (AF FORM 1075)	88
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	83
N302 ESTIMATE COSTS OF INSTALLATIONS AND EQUIPMENT SERVICES ON GOVERNMENT OWNED TELEPHONE EQUIPMENT	83
F154 PREPARE WORK ORDERS	79
N296 ASSIGN WORK ORDER NUMBERS TO GOVERNMENT OWNED EQUIPMENT	79
N301 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVITIES BETWEEN INSIDE AND OUTSIDE PLANT	71
N304 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO GOVERN- MENT OWNED TELEPHONE SERVICE REQUESTS	71
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	67
C69 EVALUATE TELEPHONE SERVICE REQUEST SITES	67
F146 INTERPRET INSTALLATION SITE DIAGRAMS	63
N303 MAINTAIN GOVERNMENT OWNED WORK ORDER REGISTERS	63
F145 INTERPRET BLUEPRINTS	58
H194 SURVEY FACILITIES FOR PLACEMENT OF EQUIPMENT AND CONNECTING BLOCKS	58
N295 ASSIGN RECOMMENDED DUE DATES TO GOVERNMENT OWNED EQUIPMENT	58
N297 CONDUCT INSPECTION SURVEYS OF GOVERNMENT OWNED TELEPHONE EQUIPMENT INSTALLATIONS	58
N300 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVI- TIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	54
F145 INTERPRET BLUEPRINTS	50
G175 PLAN LOCATIONS OF INSTRUMENTS WITH SUBSCRIBERS	46
I199 BRIEF SUBSCRIBERS ON KTS FUNCTIONS	46
A6 DETERMINE WORK PRIORITIES	42
G174 PLAN LOCATIONS OF EQUIPMENT WITH SUBSCRIBERS	42
B48 WRITE CORRESPONDENCE	42
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	38
C55 EVALUATE GOVERNMENT OWNED TELEPHONE EQUIPMENT COMPLETED WORK ORDER DISCREPANCIES	38
M292 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO LEASED TELEPHONE SERVICE REQUESTS	38

TABLE II
REPRESENTATIVE TASKS PERFORMED BY TELEPHONE SURVEYOR NCOIC's
(GRP160)

TASKS	PERCENT MEMBERS PERFORMING (N=9)
F146 INTERPRET INSTALLATION SITE DIAGRAMS	100
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	100
N296 ASSIGN WORK ORDER NUMBERS TO GOVERNMENT OWNED EQUIPMENT	100
N302 ESTIMATE COSTS OF INSTALLATIONS AND EQUIPMENT SERVICES ON GOVERNMENT OWNED TELEPHONE EQUIPMENT	100
N303 MAINTAIN GOVERNMENT OWNED WORK ORDER REGISTERS	100
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	89
C69 EVALUATE TELEPHONE SERVICE REQUEST SITES	89
F145 INTERPRET BLUEPRINTS	89
F154 PREPARE WORK ORDERS	89
N295 ASSIGN RECOMMENDED DUE DATES TO GOVERNMENT OWNED EQUIPMENT	89
N300 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVI- TIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	89
N304 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO GOVERNMENT OWNED TELEPHONE SERVICE REQUESTS	89
A16 PLAN LAYOUT OF FACILITIES	78
E121 PREPARE LOCAL COMMUNICATIONS SERVICE ORDER FORMS (AF FORM 1075)	78
F147 INTERPRET LAYOUT DRAWINGS	78
M288 COORDINATE LEASED TELEPHONE INSTALLATION ACTIVITIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	78
M292 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO LEASED TELEPHONE SERVICE REQUESTS	78
N297 CONDUCT INSPECTION SURVEYS OF GOVERNMENT OWNED TELEPHONE EQUIPMENT INSTALLATIONS	78
N301 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVITIES BETWEEN INSIDE AND OUTSIDE PLANT	78
A6 DETERMINE WORK PRIORITIES	67
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	67
B48 WRITE CORRESPONDENCE	67
C55 EVALUATE GOVERNMENT OWNED TELEPHONE EQUIPMENT COMPLETED WORK ORDER DISCREPANCIES	67
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	56
B32 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	56

TABLE III

REPRESENTATIVE TASKS PERFORMED BY SENIOR TELEPHONE SURVEYORS
(GRP104)

TASKS	PERCENT MEMBERS PERFORMING (N=7)
E121 PREPARE LOCAL COMMUNICATIONS SERVICE ORDER FORMS (AF FORM 1075)	100
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	100
N302 ESTIMATE COSTS OF INSTALLATIONS AND EQUIPMENT SERVICES ON GOVERNMENT OWNED TELEPHONE EQUIPMENT	100
C69 EVALUATE TELEPHONE SERVICE REQUEST SITES	100
F154 PREPARE WORK ORDERS	86
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	71
F145 INTERPRET BLUEPRINTS	71
F147 INTERPRET LAYOUT DRAWINGS	71
N296 ASSIGN WORK ORDER NUMBERS TO GOVERNMENT OWNED EQUIPMENT	71
N297 CONDUCT INSPECTION SURVEYS OF GOVERNMENT OWNED TELEPHONE EQUIPMENT INSTALLATIONS	71
N301 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVITIES BETWEEN INSIDE AND OUTSIDE PLANT	71
F146 INTERPRET INSTALLATION SITE DIAGRAMS	57
N304 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO GOVERNMENT OWNED TELEPHONE SERVICE REQUESTS	57
G174 PLAN LOCATIONS OF EQUIPMENT WITH SUBSCRIBERS	43
G175 PLAN LOCATIONS OF INSTRUMENTS WITH SUBSCRIBERS	43
N295 ASSIGN RECOMMENDED DUE DATES TO GOVERNMENT OWNED EQUIPMENT	43
N300 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVI- TIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	43
N303 MAINTAIN GOVERNMENT OWNED WORK ORDER REGISTERS	43
A6 DETERMINE WORK PRIORITIES	29
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	29
B47 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR TECHNICIANS (AFSC 36274)	29
B48 WRITE CORRESPONDENCE	29
C55 EVALUATE GOVERNMENT OWNED TELEPHONE EQUIPMENT COMPLETED WORK ORDER DISCREPANCIES	29
C68 EVALUATE SUGGESTIONS	29
C74 PREPARE APRs	29

TABLE IV
 REPRESENTATIVE TASKS PERFORMED BY JUNIOR TELEPHONE SURVEYORS
 (GRP063)

TASKS	PERCENT MEMBERS PERFORMING (N=5)
E121 PREPARE LOCAL COMMUNICATIONS SERVICE ORDER FORMS (AF FORM 1075)	80
N304 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO GOVERN- MENT OWNED TELEPHONE SERVICE REQUESTS	80
N301 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVITIES BETWEEN INSIDE AND OUTSIDE PLANT	80
N296 ASSIGN WORK ORDER NUMBERS TO GOVERNMENT OWNED EQUIPMENT	60
F154 PREPARE WORK ORDERS	60
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	60
P335 LOG INCOMING REQUIREMENTS FOR INSTALLATIONS	60
H194 SURVEY FACILITIES FOR PLACEMENT OF EQUIPMENT AND CONNECTING BLOCKS	60
I199 BRIEF SUBSCRIBERS ON KTS FUNCTIONS	60
N302 ESTIMATE COSTS OF INSTALLATIONS AND EQUIPMENT SERVICES ON GOVERNMENT OWNED TELEPHONE EQUIPMENT	40
N303 MAINTAIN GOVERNMENT OWNED WORK ORDER REGISTERS	40
N300 COORDINATE GOVERNMENT OWNED TELEPHONE INSTALLATION ACTIVI- TIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	40
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	40
G175 PLAN LOCATIONS OF INSTRUMENTS WITH SUBSCRIBERS	40
A6 DETERMINE WORK PRIORITIES	20

TABLE V

REPRESENTATIVE TASKS PERFORMED BY LEASED TELEPHONE COMMUNICATIONS COORDINATORS
(GRP053)

TASKS	PERCENT MEMBERS PERFORMING (N=43)
M288 COORDINATE LEASED TELEPHONE INSTALLATION ACTIVITIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	100
M285 ASSIGN WORK ORDER NUMBERS FOR LEASED EQUIPMENT	96
M289 ESTIMATE COSTS OF INSTALLATIONS AND EQUIPMENT SERVICES ON LEASED TELEPHONE EQUIPMENT	96
M291 MAINTAIN LEASED TELEPHONE WORK ORDER REGISTERS	96
M292 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO LEASED TELEPHONE SERVICE REQUESTS	96
M290 INSPECT LEASED TELEPHONE EQUIPMENT INSTALLATIONS	93
C61 EVALUATE LEASED TELEPHONE EQUIPMENT WORK ORDER DISCREPANCIES	89
M293 PREPARE ITEMS FOR PRESENTATION TO THE BASE CEM BOARD	87
M294 PREPARE ITEMS FOR SUBMISSION TO HIGHER HEADQUARTERS FOR APPROVAL	87
C60 EVALUATE LEASED TELEPHONE EQUIPMENT SERVICE CHARGES	84
M284 ASSIGN RECOMMENDED DUE DATES FOR LEASED EQUIPMENT	84
E120 PREPARE LEASE COMMUNICATION SERVICE REPORTS	78
B48 WRITE CORRESPONDENCE	71
C69 EVALUATE TELEPHONE SERVICE REQUEST SITES	71
C62 EVALUATE LEASED TELEPHONE SYSTEM DAMAGE INCIDENTS	69
E118 PREPARE INDIVIDUAL TELEPHONE SERVICE RECORD FORMS (AF FORM 1077)	69
A6 DETERMINE WORK PRIORITIES	62
E132 REVIEW COMMUNICATION SERVICE AUTHORIZATION RECORDS	62
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	58
F154 PREPARE WORK ORDERS	56
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	44
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	44
E115 PREPARE COMMUNICATION ELECTRONIC METEOROLOGICAL (CEM) BOARD REPORTS	44
E114 ANNOTATE TELEPHONE EQUIPMENT KEY SYSTEM RECORD/WORKSHEET FORMS (AFTO FORM 122)	42
E116 PREPARE COMMUNICATION SERVICE AUTHORIZATION FORMS (DD FORM 428)	42

TABLE VI
REPRESENTATIVE TASKS PERFORMED BY LEASED TELEPHONE MONITORS
(GRP152)

TASKS	PERCENT MEMBERS PERFORMING (N=37)
M285 ASSIGN WORK ORDER NUMBERS FOR LEASED EQUIPMENT	100
M288 COORDINATE LEASED TELPHONE INSTALLATION ACTIVITIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	100
M289 ESTIMATE COSTS OF INSTALLATIONS AND EQUIPMENT SERVICES ON LEASED TELEPHONE EQUIPMENT	100
M290 INSPECT LEASED TELEPHONE EQUIPMENT INSTALLATION	100
M292 PERFORM SITE SURVEY EVALUATIONS IN RESPONSE TO LEASED TELEPHONE SERVICE REQUESTS	100
M291 MAINTAIN LEASED TELEPHONE WORK ORDER REGISTERS	97
M294 PREPARE ITEMS FOR SUBMISSION TO HIGHER HEADQUARTERS FOR APPROVAL	92
C61 EVALUATE LEASED TELEPHONE EQUIPMENT WORK ORDER DISCREPANCIES	89
M284 ASSIGN RECOMMENDED DUE DATES FOR LEASED EQUIPMENT	92
C60 EVALUATE LEASED TELEPHONE EQUIPMENT SERVICE CHARGES	86
M293 PREPARE ITEMS FOR PRESENTATION TO THE BASE CEM BOARD	86
E120 PREPARE LEASE COMMUNICATION SERVICE REPORTS	78
C62 EVALUATE LEASED TELEPHONE SYSTEM DAMAGE INCIDENTS	73
B48 WRITE CORRESPONDENCE	70
E118 PREPARE INDIVIDUAL TELEPHONE SERVICE RECORD FORMS (AF FORM 1077)	70
C69 EVALUATE TELEPHONE SERVICE REQUEST SITES	68
M286 COORDINATE LEASE REQUIREMENTS WITH BASE PROCUREMENT OFFICES	65
A6 DETERMINE WORK PRIORITIES	62
E132 REVIEW COMMUNICATION SERVICE AUTHORIZATION RECORDS	62
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	57
F154 PREPARE WORK ORDERS	57
M287 COORDINATE LEASED EQUIPMENT CHARGES WITH BASE FINANCE OFFICES	57
E116 PREPARE COMMUNICATION SERVICE AUTHORIZATION FORMS (DD FORM 428)	49
E115 PREPARE COMMUNICATION ELECTRONIC METEOROLOGICAL (CEM) BOARD REPORTS	43
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	41

TABLE VII
 REPRESENTATIVE TASKS PERFORMED BY LEASED TELEPHONE NOCIC's
 (GRP147)

TASKS	PERCENT MEMBERS PERFORMING (N=5)
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	100
A6 DETERMINE WORK PRIORITIES	100
B32 DIRECT MAINTENANCE OF ADMINISTRATIVE FILES	100
C52 EVALUATE BUDGET OR FINANCIAL REQUIREMENTS	100
C60 EVALUATE LEASED TELEPHONE EQUIPMENT SERVICE CHARGES	100
C61 EVALUATE LEASED TELEPHONE EQUIPMENT WORK ORDER DISCREPANCIES	100
C69 EVALUATE TELEPHONE SERVICE REQUEST SITES	100
D87 CONDUCT OJT	100
D90 COUNSEL TRAINEES ON TRAINING PROGRESS	100
D91 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	100
D92 DETERMINE OJT TRAINING REQUIREMENTS	100
E114 ANNOTATE TELEPHONE EQUIPMENT KEY SYSTEM RECORD/WORKSHEET FORMS (AFTO FORM 122)	100
E120 PREPARE LEASE COMMUNICATION SERVICE REPORTS	100
E132 REVIEW COMMUNICATION SERVICE AUTHORIZATION RECORDS	100
E133 REVIEW SUBSCRIBER REQUESTED COMMUNICATIONS LAYOUTS	100
F139 COMPILE DATA FROM EQUIPMENT RECORDS	100
F145 INTERPRET BLUEPRINTS	100
M285 ASSIGN WORK ORDER NUMBERS FOR LEASED EQUIPMENT	100
M286 COORDINATE LEASE REQUIREMENTS WITH BASE PROCUREMENT OFFICES	100
M287 COORDINATE LEASED EQUIPMENT CHARGES WITH BASE FINANCE OFFICES	100
M288 COORDINATE LEASED TELEPHONE INSTALLATION ACTIVITIES BETWEEN BASE UNITS AND COMMERCIAL TELEPHONE COMPANIES	100
M290 INSPECT LEASED TELEPHONE EQUIPMENT INSTALLATIONS	100
M291 MAINTAIN LEASED TELEPHONE WORK ORDER REGISTERS	100
M293 PREPARE ITEMS FOR PRESENTATION TO THE BASE CEM BOARD	100
M294 PREPARE ITEMS FOR SUBMISSION TO HIGHER HEADQUARTERS FOR APPROVAL	100

TABLE VIII
REPRESENTATIVE TASKS PERFORMED BY SUPERVISORY PERSONNEL
(GRP019)

TASKS	PERCENT MEMBERS PERFORMING (N=68)
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	87
B48 WRITE CORRESPONDENCE	81
C74 PREPARE APRs	81
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	78
A22 PLAN WORK ASSIGNMENTS	78
A25 SCHEDULE LEAVES OR PASSES	78
A5 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	77
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	77
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	77
C51 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	77
B28 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	75
B42 SCHEDULE WORK ASSIGNMENTS	75
A6 DETERMINE WORK PRIORITIES	74
C53 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	72
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	71
B40 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	69
B46 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36254)	69
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	68
B33 DIRECT MAINTENANCE OR UTILIZATION OF TOOLS, EQUIPMENT, SUPPLIES, OR WORK SPACE	66
C58 EVALUATE INSPECTION REPORTS	66
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	66
A8 DEVELOP WORK METHODS OR PROCEDURES	65
C49 ANALYZE WORKLOAD REQUIREMENTS	65
D92 DETERMINE OJT TRAINING REQUIREMENTS	65
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	63

TABLE IX
REPRESENTATIVE TASKS PERFORMED BY RESIDENT COURSE AND OJT SUPERVISORS
(GRP066)

TASKS	PERCENT MEMBERS PERFORMING (N=12)
B28 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	92
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	92
B48 WRITE CORRESPONDENCE	92
A5 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT OR SUPPLIES	83
B26 CONDUCT BRIEFINGS OTHER THAN TRAINING BRIEFINGS	83
C53 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	83
C74 PREPARE APRs	83
A25 SCHEDULE LEAVES OR PASSES	75
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	75
C58 EVALUATE INSPECTION REPORTS	75
C59 EVALUATE JOB DESCRIPTIONS	75
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	67
A22 PLAN WORK ASSIGNMENTS	67
B42 SCHEDULE WORK ASSIGNMENTS	67
C49 ANALYZE WORKLOAD REQUIREMENTS	67
C68 EVALUATE SUGGESTIONS	67
C71 EVALUATE WORK SCHEDULES	67
B31 DIRECT DEVELOPMENT OR MAINTENANCE OF STATUS BOARDS, GRAPHS, OR CHARTS	58
B33 DIRECT MAINTENANCE OR UTILIZATION OF TOOLS, EQUIPMENT, SUPPLIES, OR WORK SPACE	58
B35 IMPLEMENT SAFETY PROGRAMS	58
B38 INITIATE PERSONNEL ACTION REQUESTS	58
C63 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	58
C66 EVALUATE SAFETY PROGRAMS	58
C71 EVALUATE WORK SCHEDULES	58
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	50

TABLE X
 REPRESENTATIVE TASKS PERFORMED BY GOVERNMENT OWNED TELEPHONE
 COMMUNICATION SUPERVISORS
 (GRP093)

TASKS	PERCENT MEMBERS PERFORMING (N=35)
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	91
A5 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	91
A15 PLAN EQUIPMENT REPLACEMENT REPAIR, OR DISPOSAL	91
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	91
B48 WRITE CORRESPONDENCE	91
C51 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	91
C74 PREPARE APRs	91
A6 DETERMINE WORK PRIORITIES	89
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	89
A22 PLAN WORK ASSIGNMENTS	89
B28 CONDUCT SUPERVISORY ORIENTATIONS OF NEWLY ASSIGNED PERSONNEL	89
B33 DIRECT MAINTENANCE OR UTILIZATION OF TOOLS, EQUIPMENT, SUPPLIES, OR WORK SPACE	89
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	89
C53 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	89
A25 SCHEDULE LEAVES OR PASSES	86
B42 SCHEDULE WORK ASSIGNMENTS	86
C49 ANALYZE WORKLOAD REQUIREMENTS	86
C58 EVALUATE INSPECTION REPORTS	86
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	83
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	83
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	80
A16 PLAN LAYOUT OF FACILITIES	80
B40 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	80
B46 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36254)	80
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	80

TABLE XI

REPRESENTATIVE TASKS PERFORMED BY CUSTOMER SERVICE AND JOB CONTROL SUPERVISORS
(GRP105)

TASKS	PERCENT MEMBERS PERFORMING (N=9)
A22 PLAN WORK ASSIGNMENTS	100
D92 DETERMINE OJT TRAINING REQUIREMENTS	100
A1 ASSIGN PERSONNEL TO DUTY POSITIONS	89
A2 ASSIGN SPONSORS FOR NEWLY ASSIGNED PERSONNEL	89
A6 DETERMINE WORK PRIORITIES	89
A12 ESTABLISH PERFORMANCE STANDARDS FOR SUBORDINATES	89
A25 SCHEDULE LEAVES OR PASSES	89
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	89
C71 EVALUATE WORK SCHEDULES	89
C74 PREPARE APRs	89
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	89
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	78
A8 DEVELOP WORK METHODS OR PROCEDURES	78
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	78
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	78
B42 SCHEDULE WORK ASSIGNMENTS	78
B46 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36254)	78
B47 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR TECHNICIANS (AFSC (36274)	78
C51 ENDORSE AIRMEN PERFORMANCE REPORTS (APR)	78
D85 ASSIGN ON-THE-JOB TRAINING (OJT) TRAINERS	78
D87 CONDUCT OJT	78
D90 COUNSEL TRAINEES ON TRAINING PROGRESS	78
D91 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	78
A21 PLAN TELEPHONE REPAIRS REQUIREMENTS	67
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	67

TABLE XII
REPRESENTATIVE TASKS PERFORMED BY TRAINING INSTRUCTORS
(GRP007)

TASKS	PERCENT MEMBERS PERFORMING (N=27)
D90 COUNSEL TRAINEES ON TRAINING PROGRESS	63
D91 DEMONSTRATE HOW TO LOCATE TECHNICAL INFORMATION	63
D88 CONDUCT RESIDENT COURSE CLASSROOM TRAINING	56
D105 PREPARE LESSON PLANS	56
E123 PREPARE REPARABLE ITEM PROCESSING TAG FORMS (AFTO FORM 350)	48
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	44
B40 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	44
D84 ADMINISTER TESTS	44
D108 SCORE TESTS	44
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	44
B43 SUPERVISE APPRENTICE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36234)	41
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	41
D106 PROCURE TRAINING AIDS, SPACE, OR EQUIPMENT	41
D101 EVALUATE PROGRESS OF RESIDENT COURSE STUDENTS	37
F150 LOCATE PART NUMBERS USING SUPPLY INDICES	37
D109 WRITE TEST QUESTIONS	33
E130 PREPARE UNSERVICEABLE (CONDEMNED) TAG MATERIEL FORMS (DD FORM 1577)	33
B26 CONDUCT BRIEFINGS OTHER THAN TRAINING BRIEFINGS	30
B48 WRITE CORRESPONDENCE	30
E131 PREPARE UNSERVICEABLE (REPARABLE) TAG MATERIEL FORMS (DD FORM 1577-2)	30
I200 DEMONSTRATE KTS CAPABILITIES	30
D100 EVALUATE OJT TRAINEES	26
F151 LOCATE TO NUMBERS AND TITLES USING INDICES	26
A5 DETERMINE REQUIREMENTS FOR SPACE, PERSONNEL, EQUIPMENT, OR SUPPLIES	22
A17 PLAN PROCEDURES FOR MAINTAINING SUPPLY STOCK LEVELS	22

TABLE XIII

REPRESENTATIVE TASKS PERFORMED BY QUALITY CONTROL NCOIC's
(GRP002)

TASKS	PERCENT MEMBERS PERFORMING (N=15)
C80 SCHEDULE QUALITY CONTROL INSPECTIONS	60
B26 CONDUCT BRIEFINGS OTHER THAN TRAINING BRIEFINGS	47
C53 EVALUATE COMPLIANCE WITH PERFORMANCE STANDARDS	40
D100 EVALUATE OJT TRAINEES	40
C58 EVALUATE INSPECTION REPORTS	33
D99 EVALUATE EFFECTIVENESS OF TRAINING PROGRAMS	33
D102 EVALUATE TRAINING METHODS OR TECHNIQUES	33
B48 WRITE CORRESPONDENCE	27
F151 LOCATE TO NUMBERS AND TITLES USING INDICES	27
A14 PLAN BRIEFINGS	20
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	20
C50 CONDUCT TELEPHONE SYSTEM DAMAGE INCIDENT INSPECTIONS	20
C66 EVALUATE SAFETY PROGRAMS	20
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	20
B39 INTERPRET POLICIES, DIRECTIVES, OR PROCEDURES FOR SUBORDINATES	13
C49 ANALYZE WORKLOAD REQUIREMENTS	13
C55 EVALUATE GOVERNMENT OWNED TELEPHONE EQUIPMENT COMPLETED WORK ORDER DISCREPANCIES	13
C56 EVALUATE GOVERNMENT OWNED TELEPHONE SYSTEM DAMAGE INCIDENTS	13
C63 EVALUATE MAINTENANCE OR USE OF WORKSPACE, EQUIPMENT, OR SUPPLIES	13
C68 EVALUATE SUGGESTIONS	13
E136 UPDATE PUBLICATION FILES	13
A3 COORDINATE WITH OPERATIONS PERSONNEL ON MODIFYING OR ESTABLISHING BASE MISSION OPERATIONAL PLANS	7
A4 COORDINATE WORK ACTIVITIES WITH OTHER BASE ORGANIZATIONS	7
A6 DETERMINE WORK PRIORITIES	7
A8 DEVELOP WORK METHODS OR PROCEDURES	7

TABLE XIV
REPRESENTATIVE TASKS PERFORMED BY INSTALLATION AND REPAIR PERSONNEL
(GRP163)

TASKS	PERCENT MEMBERS PERFORMING (N=346)
H179 INSTALL OR REMOVE CABLE RUNS	99
H180 INSTALL OR REMOVE CONNECTING BLOCKS	99
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	99
I205 INSTALL OR REMOVE JUMPERS	99
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	98
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	98
H183 INSTALL OR REMOVE INSIDE WIRING	97
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	97
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	97
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	97
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	95
I204 INSTALL OR REMOVE FEEDER CABLES	95
I229 TERMINATE FEEDER CABLES	95
J234 CLEAN TELEPHONE INSTRUMENT CASES	94
G176 TEST OR VERIFY BASE CABLE PAIRS	92
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	92
I213 INSTALL OR REMOVE POWER SUPPLY CABLES	92
I215 INSTALL OR REMOVE POWER SUPPLY UNITS	92
I226 PERFORM OPERATIONAL CHECKS OF KTSs	92
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	92
J236 ISOLATE FAULTS IN TELEPHONE SETS	92
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	91
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	90
I222 ISOLATE MALFUNCTIONS IN KTS CABLES	89

TABLE XV
 REPRESENTATIVE TASKS PERFORMED BY JUNIOR TELEPHONE INSTALLATION
 AND REPAIR CREWMEMBERS
 (GRP183)

TASKS	PERCENT MEMBERS PERFORMING (N=58)
H179 INSTALL OR REMOVE CABLE RUNS	100
H180 INSTALL OR REMOVE CONNECTING BLOCKS	100
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	100
I205 INSTALL OR REMOVE JUMPERS	100
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	100
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	97
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	93
H183 INSTALL OR REMOVE INSIDE WIRING	93
J234 CLEAN TELEPHONE INSTRUMENT CASES	93
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	91
I229 TERMINATE FEEDER CABLES	91
J236 ISOLATE FAULTS IN TELEPHONE SETS	91
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	90
I204 INSTALL OR REMOVE FEEDER CABLES	90
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	90
J233 ASSEMBLE OR DISASSEMBLE TELPHONE SETS	88
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	86
H184 INSTALL OR REMOVE INSTRUMENTS FOR SECURE AREAS	81
I213 INSTALL OR REMOVE POWER SUPPLY CABLES	81
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	79
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	79
I226 PERFORM OPERATIONAL CHECKS OF KTSs	79
G176 TEST OR VERIFY BASE CABLE PAIRS	76
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	76
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	76

TABLE XVI

REPRESENTATIVE TASKS PERFORMED BY SENIOR TELEPHONE INSTALLATION
AND REPAIR CREWMEMBERS

TASKS	PERCENT MEMBERS PERFORMING (N=284)
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	99
H179 INSTALL OR REMOVE CABLE RUNS	99
H180 INSTALL OR REMOVE CONNECTING BLOCKS	99
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	99
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	99
I205 INSTALL OR REMOVE JUMPERS	99
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	99
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	99
H183 INSTALL OR REMOVE INSIDE WIRING	98
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	98
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	98
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	97
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	96
I204 INSTALL OR REMOVE FEEDER CABLES	96
I229 TERMINATE FEEDER CABLES	96
G176 TEST OR VERIFY BASE CABLE PAIRS	95
I215 INSTALL OR REMOVE POWER SUPPLY UNITS	95
I222 ISOLATE MALFUNCTIONS IN KTS CABLES	95
I226 PERFORM OPERATIONAL CHECKS OF KTSs	95
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	94
I233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	94
J234 CLEAN TELEPHONE INSTRUMENT CASES	94
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	93
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	93
G159 CONNECT DROP WIRES TO TERMINALS	92

TABLE XVII

REPRESENTATIVE TASKS PERFORMED BY TELEPHONE EQUIPMENT INSTALLER NCOIC's
(GRP121)

TASKS	PERCENT MEMBERS PERFORMING (N=13)
H179 INSTALL OR REMOVE CABLE RUNS	100
H183 INSTALL OR REMOVE INSIDE WIRING	100
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	100
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	100
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	100
I205 INSTALL OR REMOVE JUMPERS	100
I221 ISOLATE MALFUNCTIONS IN KEY TELEPHONE UNITS (KTUs)	100
A6 DETERMINE WORK PRIORITIES	92
A20 PLAN TELEPHONE INSTALLATION REQUIREMENTS	92
A22 PLAN WORK ASSIGNMENTS	92
B42 SCHEDULE WORK ASSIGNMENTS	92
B48 WRITE CORRESPONDENCE	92
C74 PREPARE APRs	92
H180 INSTALL OR REMOVE CONNECTING BLOCKS	92
H181 INSTALL OR REMOVE EXTERNAL SIGNALING DEVICES	92
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	92
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	92
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	92
J236 ISOLATE FAULTS IN TELEPHONE SETS	92
B30 COUNSEL PERSONNEL ON PERSONAL OR MILITARY RELATED PROBLEMS	85
B46 SUPERVISE TELEPHONE EQUIPMENT INSTALLATION AND REPAIR SPECIALISTS (AFSC 36254)	85
I199 BRIEF SUBSCRIBERS ON KTS FUNCTIONS	85
I204 INSTALL OR REMOVE FEEDER CABLES	85
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	85
I215 INSTALL OR REMOVE POWER SUPPLY UNITS	85

TABLE XVIII
 REPRESENTATIVE TASKS PERFORMED BY TELEPHONE EQUIPMENT
 INSTALLATION CREWMEMBERS
 (GRP099)

TASKS	PERCENT MEMBERS PERFORMING (N=32)
I205 INSTALL OR REMOVE JUMPERS	97
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	94
H179 INSTALL OR REMOVE CABLE RUNS	91
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	91
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	88
H180 INSTALL OR REMOVE CONNECTING BLOCKS	84
I204 INSTALL OR REMOVE FEEDER CABLES	84
H193 PERFORM RING-BACK OPERATIONAL CHECKS OF INSTRUMENTS	81
H183 INSTALL OR REMOVE INSIDE WIRING	78
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	72
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	69
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	66
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	66
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	66
J233 ASSEMBLE OR DISASSEMBLE TELEPHONE SETS	63
G176 TEST OR VERIFY BASE CABLE PAIRS	59
H191 PERFORM DIAL SPEED OPERATION CHECKS OF INSTRUMENTS	59
H181 INSTALL OR REMOVE EXTERNAL SIGNALING DEVICES	56
H194 SURVEY FACILITIES FOR PLACEMENT OF EQUIPMENT AND CONNECTING BLOCKS	56
J234 CLEAN TELEPHONE INSTRUMENT CASES	56
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	53
I206 INSTALL OR REMOVE KEY DISTRIBUTION CABLES	53
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	53
I226 PERFORM OPERATIONAL CHECKS OF KTSs	53
I229 TERMINATE FEEDER CABLES	53

TABLE XIX
REPRESENTATIVE TASKS PERFORMED BY OUTSIDE PLANT NCOIC's
(GRP170)

TASKS	PERCENT MEMBERS PERFORMING (N=25)
E114 ANNOTATE TELEPHONE EQUIPMENT KEY SYSTEM RECORD/WORKSHOP FORMS (AFTO FORM 122)	100
H183 INSTALL OR REMOVE INSIDE WIRING	100
I205 INSTALL OR REMOVE JUMPERS	100
I208 INSTALL OR REMOVE KEY TELEPHONE UNITS (KTUs)	100
I223 ISOLATE MALFUNCTIONS IN KTSs	100
I226 PERFORM OPERATIONAL CHECKS OF KTSs	100
A15 PLAN EQUIPMENT REPLACEMENT, REPAIR, OR DISPOSAL	96
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	96
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	96
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	96
H188 ISOLATE MALFUNCTIONS IN INSIDE WIRING	96
H189 ISOLATE MALFUNCTIONS IN SUBSTATION EQUIPMENT	96
H194 SURVEY FACILITIES FOR PLACEMENT OF EQUIPMENT AND CONNECTING BLOCKS	96
I207 INSTALL OR REMOVE KEY TELEPHONE SETS	96
I222 ISOLATE MALFUNCTIONS IN KTS CABLES	96
D103 MAINTAIN TRAINING RECORDS, CHARTS, OR GRAPHS	92
F150 LOCATE PART NUMBERS USING SUPPLY INDICES	92
H179 INSTALL OR REMOVE CABLE RUNS	92
H192 PERFORM OPERATIONAL TESTS INSIDE WIRING	92
I199 BRIEF SUBSCRIBERS ON KTS FUNCTIONS	92
I200 DEMONSTRATE KTS CAPABILITIES	92
I201 INSERT DIAL CENTER CARDS AND NUMBERING STRIPS ON TELEPHONE SETS	92
I215 INSTALL OR REMOVE POWER SUPPLY UNITS	92
I221 ISOLATE MALFUNCTIONS IN KEY TELEPHONE UNITS (KTUs)	92
I230 TERMINATE KEY DISTRIBUTION CABLES	92

TABLE XX
 REPRESENTATIVE TASKS PERFORMED BY CABLE AND WIRE
 INSTALLATION CREWMEMBERS
 (GRP059)

TASKS	PERCENT MEMBERS PERFORMING (N=11)
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	100
G162 INSTALL OR REMOVE EXTERNAL WIRING	91
H179 INSTALL OR REMOVE CABLE RUNS	91
H180 INSTALL OR REMOVE CONNECTING BLOCKS	91
G159 CONNECT DROP WIRES TO TERMINALS	82
G160 INSTALL OR REMOVE DROP WIRE BUILDING ATTACHMENTS	82
G161 INSTALL OR REMOVE DROP WIRES ON PROTECTORS	82
G176 TEST OR VERIFY BASE CABLE PAIRS	82
H181 INSTALL OR REMOVE EXTERNAL SIGNALING DEVICES	82
H183 INSTALL OR REMOVE INSIDE WIRING	73
G174 PLAN LOCATIONS OF EQUIPMENT WITH SUBSCRIBERS	64
H178 CONNECT OR DISCONNECT INSIDE WIRING AT PROTECTORS	64
H184 INSTALL OR REMOVE INSTRUMENTS FOR SECURE AREAS	64
G164 INSTALL OR REMOVE GROUND WIRES	55
G170 ISOLATE MALFUNCTIONS IN OUTSIDE WIRE SUB-STATION INSTRUMENTS	55
G175 PLAN LOCATIONS OF INSTRUMENTS WITH SUBSCRIBERS	55
F144 INSPECT TOOLS OR CLIMBING EQUIPMENT	46
G163 INSTALL OR REMOVE GROUND RODS	46
G166 INSTALL OR REMOVE MULTIPLE PAIR PROTECTED TERMINALS	46
G167 INSTALL OR REMOVE OUTSIDE SUB-STATION INSTRUMENTS	46
G171 ISOLATE MALFUNCTIONS IN OUTSIDE WIRING EQUIPMENT	46
J234 CLEAN TELEPHONE INSTRUMENT CASES	46
F145 INTERPRET BLUEPRINTS	36
F152 MOVE FURNITURE	36
G165 INSTALL OR REMOVE LINE PROTECTORS	36

TABLE XIX
 REPRESENTATIVE TASKS PERFORMED BY MOBILE COMMUNICATIONS CREWMEMBERS
 (GRP061)

TASKS	PERCENT MEMBERS PERFORMING (N=49)
Q365 TERMINATE FIELD PHONE WIRING	100
Q353 ISOLATE MALFUNCTIONS ON 407-L CABLE HOCKS	98
Q348 INSTALL OR REMOVE 407-L CABLES	96
Q350 ISOLATE MALFUNCTIONS IN FIELD TELEPHONE INSTRUMENTS	96
Q356 OPERATE "M" SERIES GOVERNMENT VEHICLES	96
Q362 PERFORM OPERATIONAL TESTS OF 407-L CABLES	96
Q343 INSTALL OR REMOVE FIELD WIRING	94
Q346 INSTALL OR REMOVE TA-312 FIELD TELEPHONE INSTRUMENTS	94
Q349 INSTALL OR REMOVE 407-L TELEPHONE SYSTEM TERMINAL CANS	94
Q354 LOAD OR UNLOAD MOBILE TELEPHONE EQUIPMENT VEHICLES	94
Q361 PACK OR UNPACK TELEPHONE INSTRUMENTS OR EQUIPMENT FOR MOBILIZATION	94
Q342 INSTALL OR REMOVE BA-30 "D" FIELD TELEPHONE BATTERIES	92
Q344 INSTALL OR REMOVE HOCKS ON 407-L CABLES	92
Q363 PRACTICE MOBILIZATION ALERTS OR DEPLOYMENT EXERCISES	92
Q341 DISPOSE OF USED FIELD WIRING OR NONREPAIRABLE 407-L CABLES	90
Q340 CONNECT OR DISCONNECT CABLES TO MOBILE EQUIPMENT VANS	86
Q339 ASSEMBLE OR DISASSEMBLE CANTONEMENT FACILITIES	84
Q351 ISOLATE MALFUNCTIONS IN FIELD TELEPHONE SYSTEMS	84
Q347 INSTALL OR REMOVE WF-16/U WIRE	80
Q352 ISOLATE MALFUNCTIONS ON TA-236 TELEPHONE INSTRUMENTS	73
Q345 INSTALL OR REMOVE JUMPERS AT INTERMEDIATE DISTRIBUTION FRAMES (IDF)	71
Q359 OPERATE RL-31 "A" FRAMES	70
G169 INSTALL OR REMOVE WD-1 FIELD WIRE	65
Q364 REVIEW MOBILE OPERATION PLANS	65
H186 INSTALL OR REMOVE SUBSTATION INSTRUMENTS	49

TABLE XXII

REPRESENTATIVE TASKS PERFORMED BY TRANSISTORIZED OPERATION
PHONE SYSTEM (TOPS) INSTALLERS
(GRP012)

TASKS	PERCENT MEMBERS PERFORMING (N=17)
F147 INTERPRET LAYOUT DRAWINGS	71
I205 INSTALL OR REMOVE JUMPERS	59
F145 INTERPRET BLUEPRINTS	53
G164 INSTALL OR REMOVE GROUND WIRES	53
H179 INSTALL OR REMOVE CABLE RUNS	53
O311 INSTALL OR REMOVE PUBLIC ADDRESS SYSTEM CABLES	53
O312 INSTALL OR REMOVE PUBLIC ADDRESS SYSTEMS SPEAKERS FROM LOCATIONS SUCH AS BUILDINGS, TELEPHONE POLES, OR STANDS	53
F146 INTERPRET INSTALLATION SITE DIAGRAMS	47
O310 INSTALL OR REMOVE PUBLIC ADDRESS SYSTEM AMPLIFIERS	47
G162 INSTALL OR REMOVE EXTERNAL WIRING	41
I204 INSTALL OR REMOVE FEEDER CABLES	41
J246 SOLDER WIRING CONNECTIONS	41
O315 MAKE INITIAL INSTALLATIONS OF PUBLIC ADDRESS SYSTEM CABLES ON LOCATIONS SUCH AS BUILDINGS, TELEPHONE POLES, OR STANDS	41
O307 INSTALL JUMPERS AT MAIN DISTRIBUTION FRAMES (MDF)	35
O316 MAKE INITIAL INSTALLATIONS OF PUBLIC ADDRESS SYSTEM AMPLIFIERS	35
F148 LOAD OR UNLOAD SERVICE VEHICLES	29
J245 SOLDER TERMINAL CONNECTIONS AT IDF (INTERMEDIATE DISTRIBUTION FRAME)	29
F152 MOVE FURNITURE	24
I210 INSTALL OR REMOVE LARGE 7 FOOT CABINETS	24
H177 CONNECT OR DISCONNECT INSIDE CABLES AT CONNECTING BLOCKS	24
H182 INSTALL OR REMOVE IMPEDENCE MATCHING DEVICES	24
B40 INVENTORY EQUIPMENT, TOOLS, OR SUPPLIES	18
I202 INSTALL OR REMOVE CABLE IN UNDER FLOOR CONDUIT SYSTEMS	18
I214 INSTALL OR REMOVE POWER SUPPLY GROUNDS	18
I215 INSTALL OR REMOVE POWER SUPPLY UNITS	18

APPENDIX B

TABLE I

EQUIPMENT USED BY AT LEAST 30 PERCENT OF 36234 RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
202D	39
207B OR C	53
216A	36
230A OR B	38
232A, B, OR C	42
II. <u>1A2 SYSTEMS:</u>	
513	39
514	30
515	39
584 C PANEL	64
III. <u>COMPONENTS IN 1A2 TELEPHONE SYSTEMS:</u>	
30BW2, 20CW2	33
400B	31
400D	77
400E OR F	51
415	37
424A	36
584A, B, OR C	46
597A	32
IV. <u>6A KTS COMPONENTS:</u>	
307C	35
232B	31
V. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	82
PSM-6	62

TABLE II

EQUIPMENT USED BY AT LEAST 30 PERCENT OF 36254 RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
20BW	34
202D	34
203A	30
207B OR C	52
216A	35
230A OR B	40
232A, B, OR C	43
<u>II. 1A2 SYSTEMS:</u>	
513	32
515	34
584C PANEL	66
<u>III. COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	44
400D	67
400E OR F	45
415	41
416	30
424A	40
584A, B, OR C	55
597A	35
<u>IV. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	60
PSM-6	61

TABLE III

EQUIPMENT USED BY AT LEAST 30 PERCENT OF 36274 RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
20BW	33
101G	31
207B OR C	39
216A	32
230A OR B	31
232A, B, OR C	32
II. <u>1A2 SYSTEMS:</u>	
584 C PANEL	49
III. <u>COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	40
400D	46
424A	32
584A, B, OR C	41
597A	31
IV. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	36
PSM-6	40
TS-365GT	32

TABLE IV
EQUIPMENT USED BY AT LEAST 30 PERCENT OF 1-48 MONTHS
TAFMS RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS OF 1A1 KEY TELEPHONE SYSTEMS:</u>	
202D	40
203A	32
205A	30
207B OR C	58
216A	39
230A OR B	40
232A, B, OR C	44
<u>II. 1A2 SYSTEMS:</u>	
513	36
515	40
584C PANEL	69
<u>III. COMPONENTS OF 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	38
400B	30
400D	74
400E OR F	49
415	40
424A	35
584A, B, OR C	54
597A	34
<u>IV. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	72
PSM-6	65

TABLE V
EQUIPMENT USED BY AT LEAST 30 PERCENT OF 49-96 MONTHS
TAFMS RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS OF 1A1 KEY TELEPHONE SYSTEMS:</u>	
20BW	43
101G	34
202D	32
203A	31
205A	33
207B OR C	50
216A	37
230A OR B	43
232A, B, OR C	47
238A	33
<u>II. 1A2 SYSTEMS:</u>	
513	34
515	31
584C PANEL	69
<u>III. COMPONENTS OF 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	53
30BW, 30CW	37
101G	37
400D	72
400E OR F	47
415	48
416	37
424A	46
584A, B, OR C	59
597A	41
<u>IV. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	59
PSM-6	66

TABLE VI
EQUIPMENT USED AT LEAST BY 30 PERCENT OF 97+ MONTHS
TAFMS RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>COMPONENTS OF 1A1 KEY TELEPHONE SYSTEMS:</u>	
207B OR C	38
232A, B, OR C	31
II. <u>1A2 SYSTEMS:</u>	
584C PANEL	47
III. <u>COMPONENTS OF 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	38
30BW, 30CW	31
400D	43
424A	34
584A, B, OR C	39
IV. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	36
PSM-6	41

TABLE VII

EQUIPMENT USED BY AT LEAST 30 PERCENT OF CONUS 36254 RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>COMPONENTS OF 1A1 KEY TELEPHONE SYSTEMS:</u>	
202D	33
207B OR C	49
216A	34
230A OR B	39
232A OR B	40
II. <u>1A2 SYSTEMS:</u>	
515	31
584C PANEL	62
III. <u>COMPONENTS OF 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	39
400D	63
400E OR F	40
415	34
424A	34
584A, B, OR C	50
IV. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	62
PSM-6	60

TABLE VIII
EQUIPMENT USED BY AT LEAST 30 PERCENT OF OVERSEAS 36254 RESPONDENTS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS OF 1A1 KEY TELEPHONE SYSTEMS:</u>	
20BW	47
202D	37
203A	43
204A	39
205A	48
207B OR C	60
216A	40
230A OR B	42
232A OR B	51
238A	39
<u>II. 1A2 SYSTEMS:</u>	
513	41
515	41
584C PANEL	78
<u>III. COMPONENTS OF 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2, 20CW2	59
30BW, 30CW	40
101G	32
400D	79
400E OR F	58
407A OR B	35
415	62
416	51
418	32
424A	54
584A, B, OR C	69
597A	62
601	31
<u>IV. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	51
PSM-6	66

TABLE IX

SUPERVISORY PERSONNEL - GRP019
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>1A2 SYSTEMS:</u>	
584C PANEL	40
II. <u>COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2/20CW2	32
400D	32
584A, B, OR C	38
III. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	32
PSM-6	34

TABLE X

INSTALLATION AND REPAIR PERSONNEL- GRP163
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
20BW	46
30BW	25
101G	34
202D	50
203A	43
204A	31
205A	42
207B OR C	73
216A	52
230A OR B	54
232A, B, OR C	62
238A	36
<u>II. 1A2 SYSTEMS:</u>	
501	34
513	47
514	34
515	50
584C PANEL	90
<u>III. COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2/20CW2	60
30BW2/30CW2	41
101G OR J	39
400B	38
400D	91
400E OR F	64
407A OR B	34
415	56
416	41
424A	56
584A, B, OR C	74
597A	50
<u>IV. 6A KTS COMPONENTS:</u>	
207C	32
<u>V. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	81
PSM-6	74

TABLE XI

TELEPHONE EQUIPMENT INSTALLER NCOIC's - GRP121
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
20BW	31
207B OR C	46
216A	31
230A OR B	31
232A, B, OR C	31
<u>II. 1A2 SYSTEMS:</u>	
513	39
514	31
515	39
551 OR 551AW	31
584C PANEL	92
<u>III. COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2/20CW2	62
30BW/CW2	54
101G OR J	31
400B	31
400D	77
400E OR F	62
407A OR B	54
415	54
418	46
424A	62
4415	31
584A, B, OR C	62
597A	62
601	46
<u>IV. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	69
PSM-6	77
3550 TRI-PACK	54

TABLE XII

TELEPHONE EQUIPMENT INSTALLATION CREWMEMBERS - GRP099
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
207B OR C	50
230A OR B	34
II. <u>1A2 SYSTEMS:</u>	
584C PANEL	53
III. <u>COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
400D	72
584A, B, OR C	31
IV. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	69

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AIR FORCE OCCUPATIONAL MEASUREMENT CENTER RANDOLPH AFB TX F/8 5/9
TELEPHONE EQUIPMENT INSTALLER/REPAIRMAN CAREER LADDER. AFSC 362--ETC(U)

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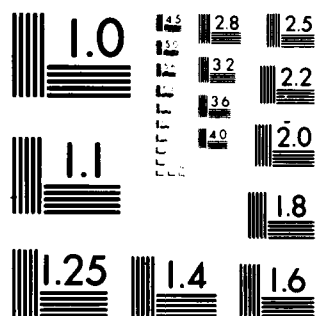
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TABLE XIII
OUTSIDE PLANT NCOIC's - GRP170
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
30BW	32
16A OR C	44
20BW	60
101G	52
202D	32
203A	52
204A	32
205A	44
207B OR C	76
216A	68
230A OR B	60
232A, B, OR C	60
238A	56
239A	40
<u>II. 1A2 SYSTEMS:</u>	
501	36
513	44
515	52
584C	84
<u>III. COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
SB6607	36
20BW2/20CW2	64
30BW/30CW	56
101G OR J	44
400D	92
400E OR F	44
407A OR B	40
415	64
416	48
418	32
424A	60
4415	44
584A, B, OR C	68
597A	44
602	32
<u>IV. TEST EQUIPMENT</u>	
AMPHENOL PLUG CABLE MAKER	56
DECIBEL METERS	36
PSM-6	52
SIGNAL GENERATORS	36
SIMPSON 260	48
TS-365GT	64
3550 TRI-PACK	44

TABLE XII

TELEPHONE EQUIPMENT INSTALLATION CREWMEMBERS - GRP099
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
207B OR C	50
230A OR B	34
II. <u>1A2 SYSTEMS:</u>	
584C PANEL	53
III. <u>COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
400D	72
584A, B, OR C	31
IV. <u>TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	69

TABLE XIV

CABLE AND WIRE INSTALLATION CREWMEMBERS - GRP059
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
<u>I. COMPONENTS IN 1A1 KEY TELEPHONE SYSTEMS:</u>	
202D	36
203A	36
207B OR C	46
<u>II. 1A2 SYSTEMS:</u>	
514	36
584C PANEL	64
<u>III. COMPONENTS IN 1A2 KEY TELEPHONE SYSTEMS:</u>	
20BW2/20CW2	46
30BW/30CW	36
400B	36
400D	91
400E OR F	82
400H	36
407A OR B	36
415	64
416	46
424A	36
SB6606	36
319A	46
584A, B, OR C	46
<u>IV. TEST EQUIPMENT:</u>	
AMPHENOL PLUG CABLE MAKER	73
PSM-6	73

TABLE XV

MOBILE COMMUNICATIONS CREWMEMBERS - GRPO61
EQUIPMENT USED BY AT LEAST 30 PERCENT OF MEMBERS

<u>EQUIPMENT</u>	<u>PERCENT PERFORMING</u>
I. <u>TEST EQUIPMENT:</u>	
PSM-6	59
407-L CABLE TESTERS	76

